

Understanding the Rural Landscape of Late Bronze Age Cyprus: A Diachronic Perspective from the Vasilikos Valley

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Abstract

For Late Bronze Age (LBA) Cyprus (ca. 1680/1650–1100 BC), while there is a long tradition of classifying both excavated and surveyed sites into types or tiers based on their estimated size, proximity to resources and each other, it is largely the excavated coastal sites that have formed the basis for politico-economic models of interpretation. As such, less attention has been given to other site types, which may have influenced and potentially contributed to the development of Cypriot society and economy in meaningful ways. Within the context of those sites, while it is widely argued that inland agricultural settlements operated as a subsistence base for miners located near the Troodos copper sources and specialists residing in the urban centres, little is known of the material culture and socioeconomic significance of the rural landscape. Rural populations are often assumed to be an amorphous, unempowered mass, fuelling centrally controlled, urban-driven systems. In order to assess and thus to expand our understanding of the character and role of this population group, and to reconsider the socioeconomic relations underpinning the Cypriot LBA rural landscape, this study engages with theoretical approaches to issues of peasantry and countryside in the Mediterranean. Subsequently, with emphasis on regional survey data from the Vasilikos Valley of Cyprus's south-central coast, a Geographic Information Systems (GIS) environment is used to explore the spectrum of socioeconomic behaviour between a subservient rural support base for specialised urban production and an independent economic agency.

Keywords: *agriculture Bronze Age, Cyprus, regional survey, rural landscape, peasants*

Introduction: Reconsidering 'Agricultural Villages'

The Cypriot Late Bronze Age (LBA) is rich in archaeological sites, a great number of which have been recorded as surface scatters by regional surveys (Catling 1962; Sørensen and Rupp 1993; Given and Knapp 2003; Todd 2004; 2013; Given *et al.* 2013a; 2013b). The breadth of identified LBA sites comprises those containing urban components such as monumental architecture, a specialised economy and the use of seals and script (e.g. Kalavassos *Ayios Dhimitrios*, Maroni, Enkomi, Hala Sultan Tekke *Vyzakia*,

Alassa Palaeotaverna), those distinguished for their ritual aspects (e.g. Myrthou *Pigadhes*) and those with apparent specialised production (e.g. pottery at Sanidha, metal at Politiko *Phorades*). The remaining sites, where such distinctions cannot be made, are categorised by size, with the larger ones termed 'secondary' and assigned a primarily administrative character (e.g. Phlamoudhi *Melissa*, Ayios Sozomenos) and the smaller ones described as 'agricultural support villages' (Analiondas *Paleoklichia*, Phlamoudhi *Sapilou*, Arediou *Vouppes* and possibly Apliki *Karamallos*) (Figure 1).

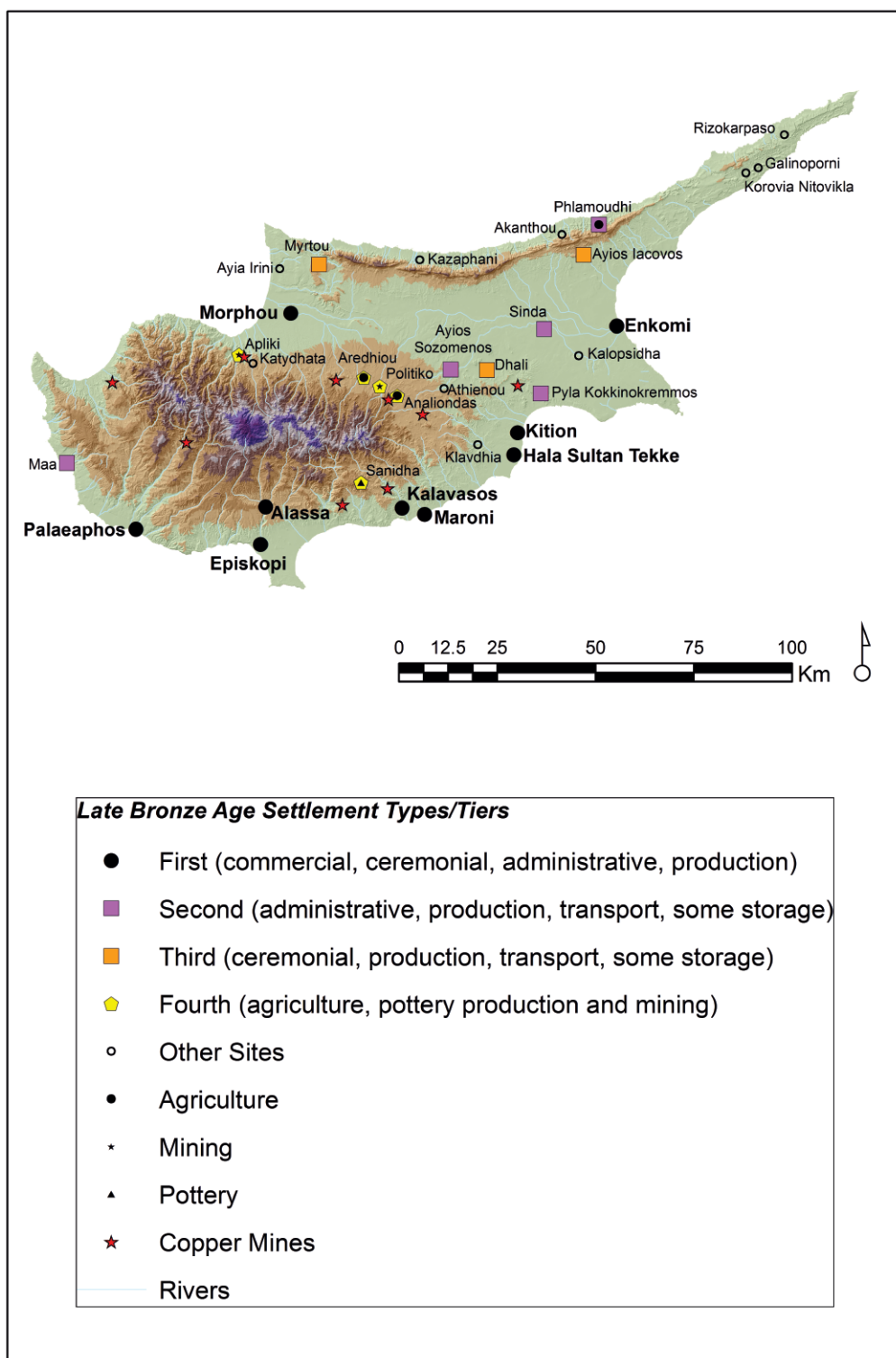


Figure 1. Late Bronze Age archaeological site types in Cyprus (based on Knapp 2013: 350).

While little is known of these ‘villages’ (most were discovered during field surveys), current interpretations (Keswani 1993; Webb and Frankel 1994; Knapp 1996; 2013: 349-59; Steel and McCartney 2008; Steel and Thomas 2008) largely limit their function to that of subsistence support for the larger and more extensively excavated sites. As a result, the LBA rural landscape (‘rural’ here referring to the countryside defined in contrast to urban environments—van Dommelen and Gómez Bellard 2008: 12) and its population—people primarily occupied with environmental management for food production, fuel, building materials, etc.—remain understudied.

Anthropological, ethnographic and sociological research (e.g. Wolf 1966; Shanin 1984) and studies on the rural landscape, countryside and peasantry of the classical, Roman and Punic worlds (Garnsey 1979; Foxhall 1990; 2004; van Dommelen 1993; 2006; Forbes 1994; 2000; van Dommelen and Gómez Bellard 2008) have established an interpretative framework that argues for more nuanced socioeconomic relations within the rural landscape. The present study follows the framework established by these studies. It aims to marshal and subsequently to assess the material evidence that may help to reconstruct the Late Cypriot (LC) rural landscape, and ultimately to understand how rural communities constitute themselves, especially in a period distinguished by and largely examined for its politico-economic complexity (Knapp 2013: 348-49). To do so, I re-examine existing narratives with a new emphasis on regional survey data, by drawing on the significant body of spatial information collected in an early, ‘intensive’ survey in the Vasilikos Valley (Todd 2004; 2013) (see Figure 3, below). These data provide a substantial Bronze Age material record and include a wide range of documentation that can provide the background against which to contextualise, compare and reflect diachronically on the LC period. Before attempting to discuss the materiality and socioeconomic

aspects of the rural landscape, however, it is necessary to consider some of the theoretical and archaeological limitations of the available LC material.

Theoretical Gaps

The concept of agricultural villages has featured in studies of Cypriot LBA habitation patterns since the 1960s (Catling 1962: 144-45). Catling’s Cyprus survey publication implemented a tripartite settlement and economic system for the entire Bronze Age, one that encompassed coastal trading centres, inland rural settlements and inland copper mining and production sites. In an effort to investigate the possible redistributive elements in this framework, Keswani (1993) applied the model of staple and wealth finance (D’Altroy and Earle 1985) to argue for a tributary system of agricultural and copper resource mobilisation requiring a degree of coercion for regional integration. More information, especially regarding site topography, agricultural, metallurgical and social processes, and a more analytical consideration of the relation between different levels of a settlement hierarchy were provided by Knapp’s (1997) social model of Protohistoric Bronze Age Cyprus (ProBA, *ca.* 1680/1650–1100/1050 BC) (Figure 2). In this model, agricultural populations reside in sites located near miners’ settlements and outside the urban centres to which they supply subsistence goods. This is accompanied by a detailed discussion on probable socioeconomic coercion mechanisms (e.g. monumentality, prestige goods) involved in resource production and mobilisation, with less attention given to possible coexisting smaller scales of socioeconomic interaction.

A lack of comprehensive discussion on the LBA rural population has long been highlighted by Hadjisavvas (1996a; 1996b); even so, there have been few attempts to add nuance to the socioeconomic aspects of the rural landscape. The study of rural land-use patterns in the

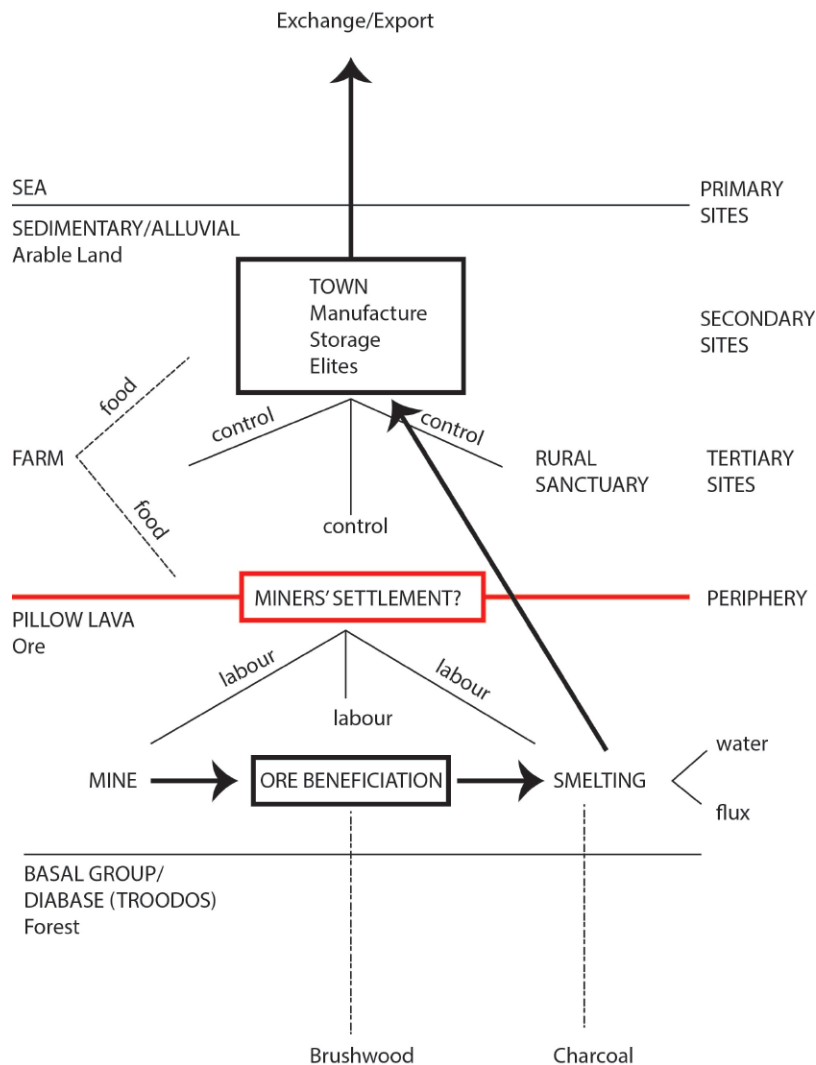


Figure 2. Proposed social model for Protohistoric Bronze Age Cyprus (adapted from Knapp 2013: 354, fig. 94).

LBA is partially inferred from floral and faunal analyses of some excavated sites (e.g. Croft 1988; 1989; Hansen 1989; Dammann 2008), and often relies on Christodoulou's (1959) geographical synthesis of the Cypriot rural economy, based on land-use practices of the late nineteenth and early twentieth centuries (e.g. Hadjisavvas 1992; Todd 2013). Whilst subsequent sociological (Attalides 1976) and archaeological (Given 2000; 2004) studies provided more detail regarding different types of rural populations, based on their economic capacity,

political beliefs and links to formal administration, Christodoulou's study—a largely under-scrutinised ethnographic analogy—remains very influential in Cypriot archaeology.

Given (2000: 209), however, challenged Christodoulou's traditional views regarding peasant mobility within habitation areas and the fields, using data from archaeological surveys as well as historical and ethnographic sources from the Ottoman (Given 2000) and British colonial periods (Given 2004) on Cyprus. Additionally, he provided a more holistic picture of the rural

landscape of Ottoman Cyprus, fleshing out the complexity of mobility patterns and the seasonality of settlements (Given 2000: 217). Finally, he applied some of his observations to the LC period to examine the degree to which centrally controlled taxation was employed in the Vasilikos and Maroni valleys (Given 2004: 40–48). Although he concluded that there is no evidence suggesting centralised taxation, he argued that ‘the farmers and fieldowners of the Vasilikos and Maroni Valleys clearly had to surrender much of their surplus to the elites who controlled the monumental administrative buildings’ (Given 2004: 48).

Finally, Hadjisavvas, despite being the primary advocate for the inclusion of rural populations in archaeological interpretations of the LC social economy, ironically characterises this population as the ‘rural masses’, dichotomising them from the ‘urban elite’ (Hadjisavvas 2009; Hadjisavvas and Chaniotis 2012: 164). Such dualistic terminology indicates a significant conceptual gap in our understanding of the LBA rural landscape; it prevents a deeper understanding of rural economic agency and sophistication, and omits a bottom-up perspective of the rural landscape’s economic efficiency and productive capacity, which has been considered at some length in the wider Mediterranean context (e.g. van Dommelen 1993; 2006; Horden and Purcell 2000: 273; van Dommelen and Gómez Bellard 2008: 212).

Material Limitations

This conceptual and theoretical gap is accompanied by a limited archaeological record. The material limitations of the LBA rural landscape stand in contrast to the abundance of evidence for the Early and Middle Cypriot (EC/MC) (ca. 2250–1450 BC) agrarian economy (Coleman *et al.* 1996; Swiny *et al.* 2003; Frankel and Webb 2006; Falconer *et al.* 2010). The materiality of LC rural sites is represented only by the excavations at Arediou *Vouppes* (Steel and Thomas

2008) and at the mining village of Apliki *Karamallos* (with evidence for the storage of agricultural products—du Plat Taylor 1952). To these may be added the detailed examination of surface survey materials from Arediou (Steel and McCartney 2008) and Analiondas *Paleoklichia* (Webb and Frankel 1994).

At Analiondas, Webb and Frankel (1994: 6–9) suggested that the unexcavated ground surface of an agricultural village should yield evidence for product processing and temporary storage. They subsequently used the surface material (*pthos*/storage vessel sherds, querns, rubbers, grinders and limestone vessel fragments) to characterise Analiondas as an agricultural production centre. Among the surveyed material, they distinguished *pthos* sherds indicative of variously sized vessels, some bearing seal impressions, and argued for different scales of a trade in agricultural products (Webb and Frankel 1994: 19). The occurrence and variability observed in Analiondas’s assemblage has parallels in the excavated and surveyed material from Arediou (Steel and McCartney 2008: 15–16). With reference to both Analiondas and Phlamoudhi *Sapilou*, Steel and McCartney (2008: 16) argued that the high occurrence of *pthos*, Monochrome and Plain Ware sherds, and variability within the size and shape of the *pthos* sherds, could indicate that agricultural production and storage was the primary concern of Arediou’s inhabitants.

While such information is certainly important for comprehending some aspects of LBA rural sites, in both cases interpretations rely on the smaller sites’ spatial association with and subordination to larger excavated ones. Webb and Frankel (1994: 20), for example, argued that the surrounding mining communities were likely the recipients of Analiondas’s agricultural products. However, they placed Analiondas under the political influence of Ayios Sozomenos, a large site that lay some 20 km east and is thought to have been instrumental in the circulation of copper and other products from

the surrounding area to Larnaca Bay. Similarly, Steel and Thomas (2008: 227) argued that Are-diou was likely provisioning the miners of Politiko *Phorades*, but under the politico-economic umbrella of Morphou *Toumba tou Skourou*.

I would therefore argue that our understanding of the rural landscape of LBA Cyprus is limited both in material and social terms, the result of a long tradition of urban bias in the literature (e.g. Keswani 1993; Åström and Herscher 1996; Crewe 2007; Fisher 2009; 2014) and a heavy reliance on hierarchical models of settlement patterns that have largely framed our understanding of this chronological period. I suggest that a deeper understanding of the LC rural landscape can be achieved through a consideration of existing interpretations of the Mediterranean countryside.

The Rural Landscape

Theoretical Perspectives

In discussing the socioeconomic and political relations developed and sustained in a rural landscape, it is pertinent to consider the misconceptions that have largely influenced their description, including those within the LC archaeological context. Alignment with sociological research traditions, which discuss people according to generalisations, particularly the Marxist class system (Marx 2000) that contains only a limited typology for population, discourages researchers from developing a more nuanced understanding of the rural population (Shanin 1984: 11). As a result, that population is often perceived as a uniform and homogeneous body lacking internal structure or organisation. Furthermore, the use of blanket terms such as 'peasants' and 'commoners' has been widely criticised for misappropriation and as monolithic (Wolf 1966; Shanin 1984; Lohse and Vadez 2004; van Dommelen 2006: 13; Foxhall 2007: 35-37; van Dommelen and Gómez Bellard 2008: 229-30).

A second misconception involves the assumption of the conservative persistence of rural

activities, technologies and material culture (Horden and Purcell 2000: 231-34). More specifically, the low material representation of rural activities and the problems of defining the size and range of economic behaviour as well as the inter-relations of rural populations tend to encourage the perception of a conservative diachronic development. It is unsurprising, then, that rural populations are often generalised as traditional when the historical persistence of their economic activities is described (see critiques in Kearney 1996: 1-8; Horden and Purcell 2000: 231-34; Sutton 2000; Halstead 2014: 1-8).

These misconceptions have been challenged by Wolf's seminal studies *Peasants* (1966) and *Europe and the People without History* (1982). Wolf (1966: 11) argued that it is only when a cultivator is integrated into a formal politico-economic system and subject to its powerful and influential agents that he can properly be discussed as a peasant. Wolf subsequently discussed evidence for economic agency amongst peasants, which may be observed in a variety of economic activities, surplus management strategies, socioeconomic relations, coalitions and movements. His illustration of the complexity characterising the rural landscape and countryside has been particularly influential in sociology (Shanin 1984), social economics (e.g. Ellis 1993), anthropology (e.g. Kearney 1996) and archaeology (e.g. Halligan 1983; Lohse and Valdez 2004). Wolf and the classical and Roman archaeologists he has inspired have discussed land-use patterns, site types and relations with references to, for example, crop choice and methods: staples vs arboriculture (Wolf 1966: 32; Horden and Purcell 2000: 76), scale of agriculture (Garnsey 1979; Foxhall 1990: 105-107; 2007: 34-42), use of joint or alternative subsistence strategies such as pastoralism (Wolf 1966: 35; Banning 1986: 37; Forbes 1994; Foxhall 2007: 82-83), the capacity and ability of agricultural technology to improve landscape productivity (e.g. terracing, irrigation) (Foxhall

2007: 61-72), the mobility and potential for and types of networking (Wolf 1966: 35-37, 83; Bowes *et al.* 2011: 10-11), land tenure practices and owner–cultivator relationships (e.g. tenants–subsistence farmers, slaves, wage labourers) (Foxhall 1990), inheritance systems (Wolf 1966: 73-77; Pettegrew 2001: 197-98) and family structures (Wolf 1966: 17, 65-73; Garnsey 1988 [1976]: 112; Terrenato 2007).

The most comprehensive summary of the socioeconomic potential of peasants and the countryside is undeniably Horden and Purcell's (2000: 270-78) critical commentary on the 'Mediterranean countryman'. These authors used archaeological and ethnographic data to deconstruct misconceptions regarding a stereotypically poor, autarkic, self-determined and stable peasantry and a provincial, traditional and resistant-to-change countryside. In a similar manner, but with emphasis on the ethnographic evidence for the land-use history of the southern Argolid, Sutton (2000) disentangled traditional views of the countryside as perpetuated by ethnographic descriptions, modern history and romantic approaches.

There is general agreement amongst those whose focus of study is the Mediterranean countryside that rural populations rarely live in isolation; rather, they are often involved in sophisticated production and exchange networks, with the activities and practices surrounding their economic systems integrated within wider politico-economic conditions (e.g. Banning 1986; Foxhall 1990: 113; Horden and Purcell 2000: 84). As such, reconstructing interactions with other socioeconomic and political agents is important in characterising the rural population. Many have explored these interactions, with attention to the reflexive relationship between the natural environment and human populations, use and resource management reconstruction, peasant mobility and the maintenance of producer–consumer relations (Garnsey 1988 [1976]; Foxhall 1990; van Dommelen 1993; van Dommelen and Gómez

Bellard 2008). Drawing upon these characteristics was central to establishing types of rural populations, including peasants, agricultural entrepreneurs, small- or large-scale tenants, farmers etc., and different types of land, labour, tenancy and ownership. All these points, generated from a wider consideration of work in Mediterranean archaeology, highlight the importance of distinguishing materially the interplay of power and the degrees of formal involvement in food production when reconstructing the economy of past societies, as these relations have deep social implications.

Regional Survey and the Materiality of Rural Landscapes

While the distinctions outlined in the previous section may be challenged by a fragmentary archaeological record, and complicated by accompanying methodological issues, many scholars argue that it is mainly regional survey projects that can reveal heavily used agricultural landscapes, especially during classical and Roman antiquity (Foxhall 1990; van Dommelen 1993; Pettegrew 2001). Such surveys have also demonstrated the remarkable diversity and intensity of rural life (Cherry 2003). In addition, while the materiality of rural activities emerges more clearly in excavated contexts, it is usually survey data analyses that form the basis of land-use reconstructions and diachronic settlement configurations (e.g. Barker 1988; Given and Knapp 2003; Farinetti 2011; Given *et al.* 2013a; 2013b; Vaccaro *et al.* 2013).

Surface material evidence of rural activities includes agricultural terraces, irrigation channels, mills, field shelters, animal folds and threshing floors. Other surface remains include features such as millstones and presses suggestive of cereal processing and oil production, and smaller ground stone artefacts (e.g. querns, rubber/grinders) indicative of product processing. However, because most surface remains are represented mainly by poorly preserved pottery, the identification of a rural site as a settlement

and the subsequent distinction amongst different rural settlement types pose challenges for regional survey (Foxhall 1990; Pettegrew 2001; Bintliff 2011). Specifically, in survey-derived data, the identification of rural sites and their chronological position largely depends on the diagnostic capacity of potsherds.

To acquire more detail from the survey record, some have attempted material-oriented approaches, for example establishing pottery assemblage typologies for rural settlements (Winter-Jacobsen 2007) or comparing excavated and survey assemblages (e.g. Foxhall 2004; Steel and McCartney 2008). It has been demonstrated, however, that a clear distinction between a rural site and an 'off-site' locus is not always achievable (Pettegrew 2001: 189-90). This distinction is made more difficult by a visibility bias which favours the identification of rural sites to an extent that is probably greater than the average (Foxhall 1990). While understanding the distribution of rural sites can be improved through material analyses, there remains some difficulty in identifying how people's interactions might be reflected in the materials represented at these sites (Banning 1986: 33-35). Surveys, including those dedicated to the identification of 'Roman peasants', may be unable to distinguish between settlements and 'agro-processing' areas (Vaccaro *et al.* 2013), to identify 'commuting' peasants (Garnsey 1988 [1976]: 112; Bowes *et al.* 2011: 10-11) or to determine the potential alienation of peasants' settlements from the land they are exploiting (Garnsey 1988 [1976]: 131).

Although ethnographic studies have been employed in the attempt to distinguish different rural site types (e.g. Halstead 1987; Chang 1994; Forbes 2000), more typically it is spatial analyses that emphasise location in association with resources and with reference to similar and larger nucleated settlements (see, for example, contributions in van Dommelen and Gómez Bellard 2008). In these attempts, Geographic Information Systems (GIS) have proved to be extremely useful, and their employment has

assisted researchers in classifying different soil and land types depending on their agricultural suitability, subsequently contextualising rural sites and hypothesising about their main economic activities (e.g. van Joolen 2003; Shiel and Stewart 2007; Vaccaro *et al.* 2013). Arguably, data from archaeological excavation and regional survey are probably insufficient if the goal is to retrieve all aspects contributing to the complex decision-making processes involved in selecting areas for habitation, farming, animal husbandry and other activities central to the study of rural landscapes. Given the nature of the evidence and the wider studies already discussed in Mediterranean archaeology, a more germane approach to the rural landscape involves a focus on both the larger material aggregations and the general material spread as a residue of the varying productive capacity of the landscape and the movement of people to harness it (Horden and Purcell 2000: 122).

The Vasilikos Valley

Setting the Context

The Vasilikos Valley Project (VVP) recorded over 100 Bronze Age material clusters, whose locations are important for elucidating aspects of the landscape's diachronic use (Figure 3). The valley's geomorphological makeup comprises an igneous-volcanic highland, a central chalk plateau (uplands) and an alluvial plain (lowlands), arranged in discrete zones (Figure 4). The hilly terrain of the central valley renders the soil of the chalk plateaus shallow, prone to erosion and difficult for cultivation without modification such as terracing. The deeper lowland soils, similar to other cases in Cyprus (Noller 2008: 28) and Greece (Shiel and Stewart 2007: 95), are aged, generally rich in nutrients and fertile. With the combination of hilly uplands and lowland plains as well as soils of varying depth and provenance, the valley's productivity is complex and likely influenced the locational preferences of people over time. Nevertheless, although

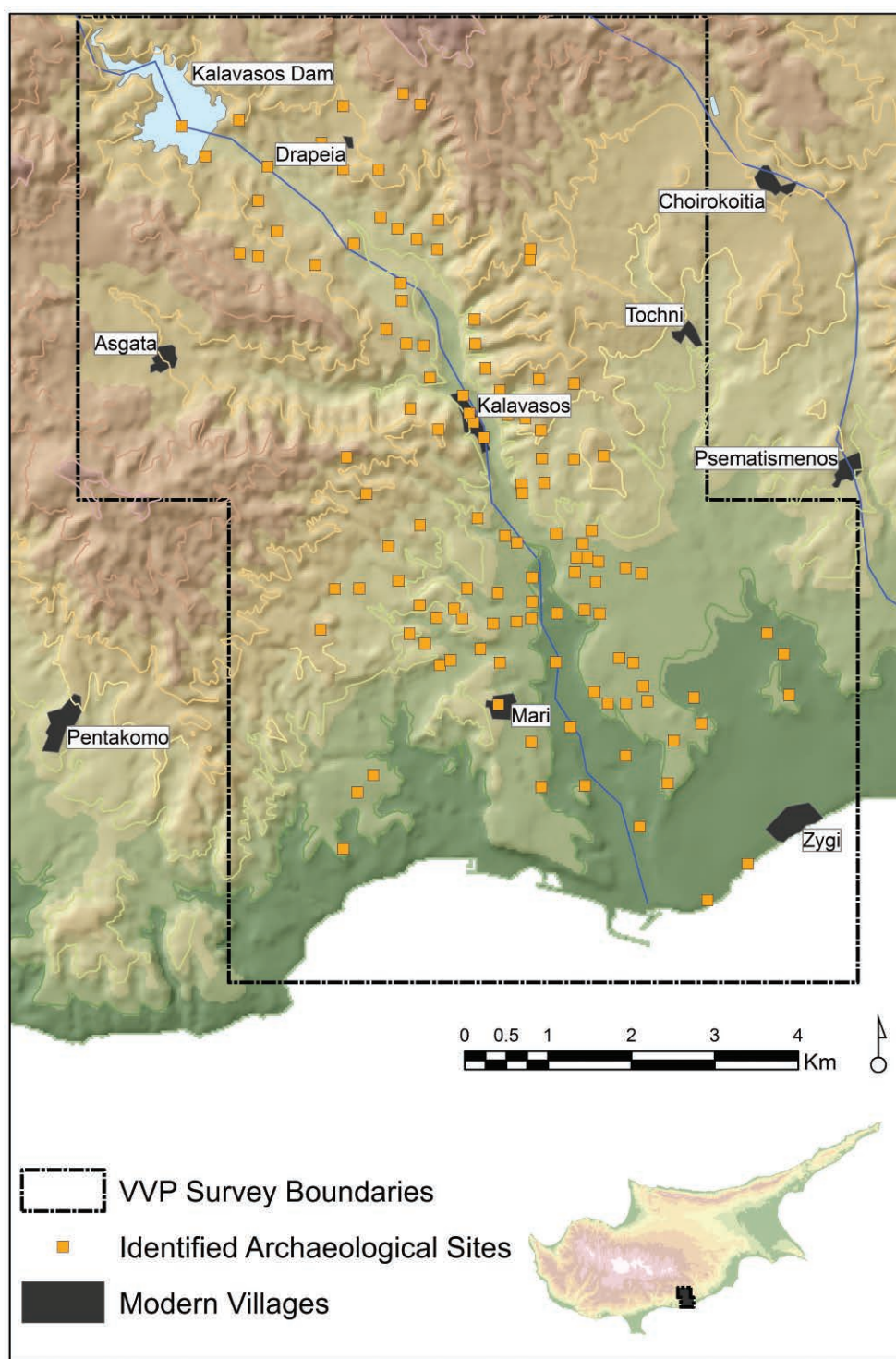


Figure 3. The Vasilikos Valley Project survey area (based on Todd 2004: fig. 20-21; 2013). Base map provided by the Department of Geology, Republic of Cyprus.

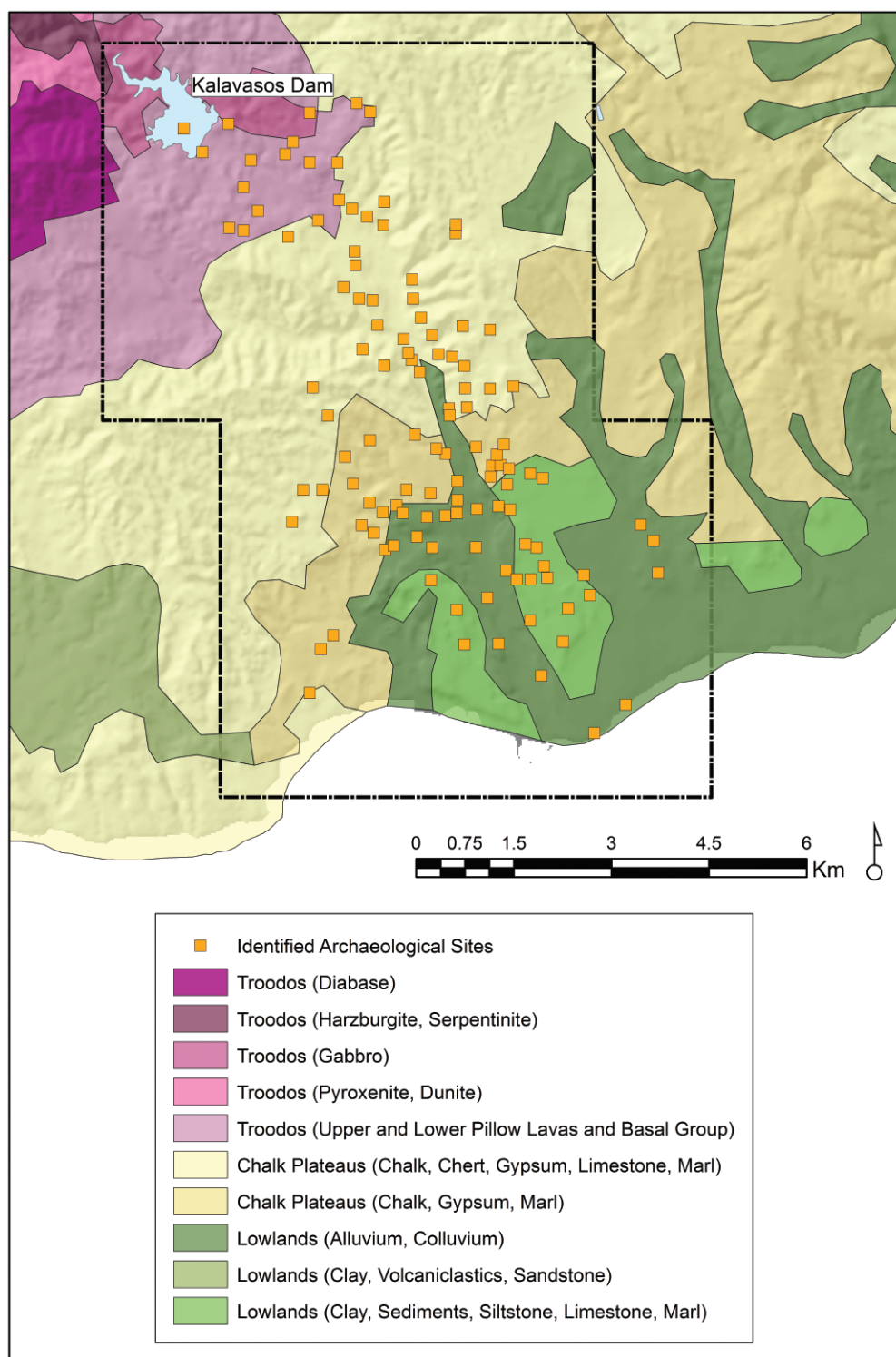


Figure 4. Vasilikos Valley geological formations. Base map provided by the Department of Geology, Republic of Cyprus.

understanding the natural heterogeneity of soils across different elevations and micro-environmental zones may provide a useful indication of past landscape use, it should not be used as a paradigm to frame the relationship between spatial location and landscape variability in pre-modern times.

In this study, GIS analysis of the VVP Bronze Age material (see Figure 5, below) merged the EC assemblages with those of the MC, because the pottery of the two periods is difficult to distinguish. The low amounts of identified EC pottery and the excavation of a single site (a cemetery in Kalavassos Village) contrasts with the overwhelming number of MC assemblages (over 100), a number argued to represent constituent components of larger occupation clusters (Todd 1986: 187; Knapp 2013: 350-52). As survey-derived pottery can only assist, not establish, refined chronological classification between the EC and MC, it becomes clear that the lack of EC evidence is associated with issues of pottery identification at the time of survey (Georgiou *et al.* 2011: 293-99). Because the EC and MC material of the Vasilikos Valley cannot be disentangled, this paper combines the two periods, adopting the widely used EC/MC designation (or Prehistoric Bronze Age, ca. 2400–1690/1650 BC).

Following the above clarification, this study distinguished two general patterns: (1) EC/MC clusters—particularly larger sites characterised by higher pottery densities such as *Mitsingites* and the *Laroumena-Arkhangelos-Malouteri-Yirto-mylos-Ayios Kaloyeros* cluster, along with excavated cemeteries in Kalavassos Village—are located in the chalk plateaus, while there is much more limited evidence of contemporaneous material in the lowlands (Figure 5); and (2) a probable settlement focus shift in the LBA from EC/MC locations to the interface of the chalk plateaus and river lowlands, and the establishment of a coastal site at Tochni *Lakkia* (Figure 6).

Before discussing the significance of these observations, we should note that the pub-

lished VVP maps do not visualise the LBA shift adequately. Rather, they depict the EC/MC and LC material clusters, which this paper illustrates in different colours (Figures 5-6), as having the same areal extent, regardless of the density of sherds found (Todd 2013: 87, 93). Detailed site descriptions (Todd 2004: 28-144) and subsequent interpretations (Todd 2013: 86-97), however, clearly mention higher concentrations of EC/MC pottery in the chalk plateaus and higher concentrations of LC pottery at the interface of the chalk plateaus and the lowlands. In an attempt to illustrate this distinction more clearly, I classified the VVP sites based on these descriptions, using as the main criterion the relative occurrence of pottery, which is the only quantitative information provided in the VVP publications. In Figures 5 and 6, sites with zero to one pottery sherd are omitted. Sites classified as [2] contained what was described as ‘few’ potsherds, [3] as ‘more than a few’ or ‘occasional’ potsherds, [4] as ‘a small concentration’ or a ‘thin spread’ of potsherds, [5] as ‘a wide spread’ of potsherds and [6] as a ‘very large’ or ‘substantial’ number of potsherds. This classification contrasts the pottery densities of EC/MC and LC clusters in order to depict better the changes in settlement patterns; it does not seek to identify potential site types.

The Rural Landscape of the Early and Middle Bronze Ages

The majority of the relatively large pottery concentrations from the EC/MC seem to be distributed along the chalk plateaus on shallow and highly erodible soils. Gomez *et al.* (2004: 7-10) explained the lack of sites on or among the deeper soils in the lowlands as a result of poor archaeological visibility, a position echoed by the VVP publication (Todd 2013: 7-9). However, the recording of multi-period archaeological sites across the lowlands (see Figure 3, above), such as the predominantly Chalcolithic Kalavassos *Pamboules*, with more than 550 stone tools (Todd 2004: 87-88), the Roman Kalavassos

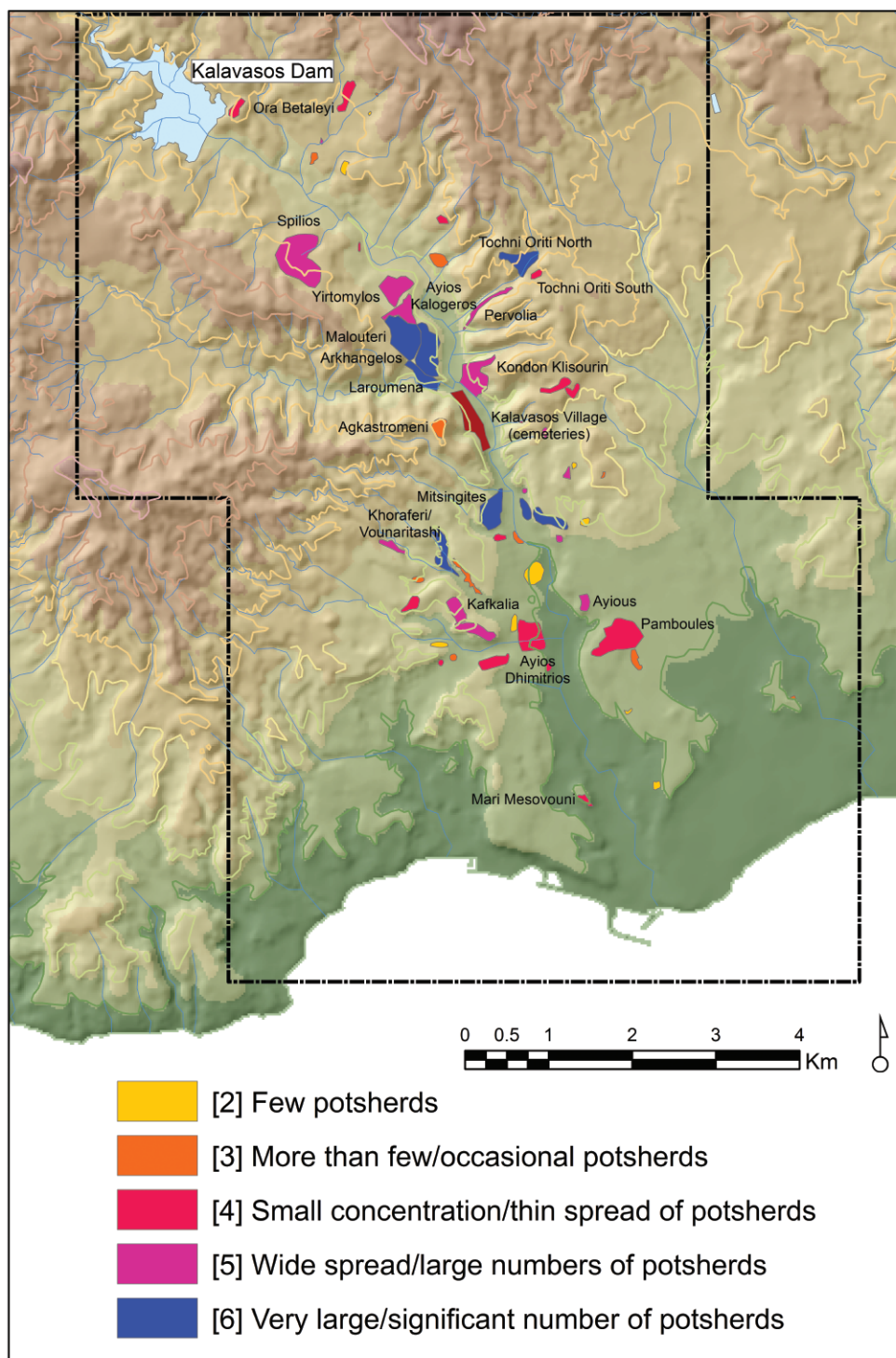


Figure 5. Vasilikos Valley EC/MC material evidence (based on Todd 2004: 27-144; 2013: 87, fig. 12). Base map provided by the Department of Geology, Republic of Cyprus.

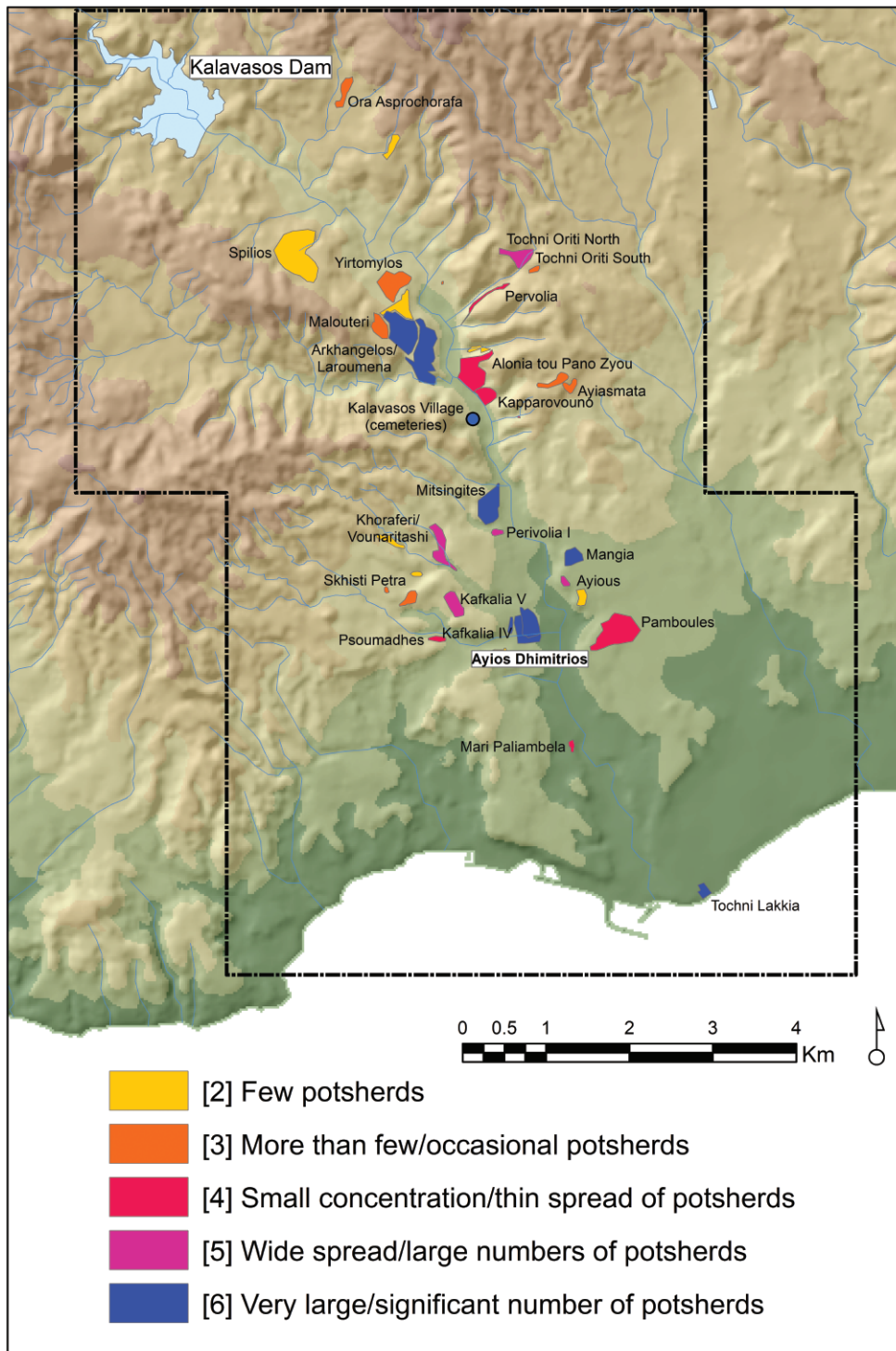


Figure 6. Vasilikos Valley LC material evidence (based on Todd 2004: 27-144; 2013: 93, fig. 13). Base map provided by the Department of Geology, Republic of Cyprus.

Sokopra (Todd 2004: 100-101) and the coastal LC Tochni *Lakkia* (Andreou and Sewell 2015), seems to suggest that the lack of EC/MC sites on the lowlands and the coast is probably not only a matter of archaeological visibility related to colluviation and alluviation. Instead, EC/MC site distribution seems to be related to a more complex set of variables discussed on the conceptualisation as well as the materiality of classical and Roman rural landscapes.

On the one hand, visibility may be linked to differing types of erosion, such that in the uplands increased erosion has actually exposed archaeological remains, while obscuring them in the lowlands. Sites in the chalk plateaus may also enjoy greater exposure due to their location above the limit of cultivation, while any lowland sites have long since been disturbed by cultivation processes operating into the modern era (Wilkinson 2004: 58). On the other hand, socio-economic factors may also contribute to the EC/MC settlement patterning, such as activities linked to pastoralism, deer hunting (Reese 1996; Croft 2003: 439-40; 2006: 277-81; Fall *et al.* 2012: 2338) and agricultural strategies. Such strategies may have favoured settlement on the shallow, light soils suited to hoe-based household gardening (an association argued in the contexts of Greece and Italy—van Joolen 2003; Farinetti 2011; Halstead 2014: 35) and the deliberate avoidance of settlement on areas of deeper and presumably more fertile soils (Halstead's [1987] traditional Mediterranean rural economy model). Although it has been argued that lowland soils, due to their clayey texture, might have required animal labour for cereal cultivation (Farinetti 2011: 12), empirical observations on soil structure in conditions of varying moisture and temperature have questioned the reliance on ploughs for cereal and other shallow-rooted crops (Hussein and Adey 1995: 357). At the same time, Halstead (2014: 33-57) has discussed extensively the complex interplay of multiple factors that influence the

selection of different methods of ploughing: e.g. field size and location, vegetation types, ownership/co-ownership/accessibility to work animals, the cost of fodder, differing perceptions of time and labour investment.

In the Vasilikos Valley, there are insufficient data to assess the availability of cattle and by extension the intensity of agriculture (degree of manual cultivation vs use of work animals) during the MC period. However, while the proportion of the Vasilikos Valley's population that may have used animals for traction is unclear, such traction and the use of the elbow plough is demonstrated in late EC terracotta models (Karageorghis 1991: pls. LXV-LXXXV). It is also evident in zooarchaeological data indicating more robust cattle phalanges, suggesting harder work (Croft 2006: 271) and the occurrence of individual older animals used for labour rather than as food (Reese 1996: 479). One can assume that, as is the case with other EC/MC sites, the rural populations of the Vasilikos Valley employed a mixture of agricultural practices that could theoretically extend to both the uplands and the lowlands, concurrently or in rotation.

Considering the mobility, versatility, mutuality and opportunism of agriculturalists and pastoralists, as revealed in classical and Roman times (Banning 1986; Garnsey 1988 [1976]; Forbes 1994; Foxhall 2007: 56-58; van Domelen and Gómez Bellard 2008: 16; Vaccaro *et al.* 2013: 130-31) and in more recent Cypriot contexts (Given 2000: 217), alongside the above discussion on soil workability and fertility, it is likely that the MC rural population of the Vasilikos Valley exploited both the uplands and the lowlands through cultivation, pastoralism, arboriculture and plant gathering. As such, the observed EC/MC settlement patterns are not strictly a matter of settlement visibility but also of the visibility of diverse agricultural activities and mobility (e.g. Bintliff 2011: xv).

Rural Landscape Dynamics: Middle to Late Bronze Ages

An island-wide shift in settlement patterns is observed during the MC III/LC I period (ProBA I, ca. 1750–1680/1650 BC) and has been linked in part to the exploitation of copper ores and their importance in international trade markets (summarised by Knapp 2013: 348–49). This transitional period in the Vasilikos Valley is materially limited and poorly understood. The MC III / LC I and LC IA periods are attested by a few pottery sherds from *Mitsingites* and *Ayios* (Todd 2013: 94) and by two LC I tombs found within the MC cemeteries of Kalavassos Village (Todd and Pearlman 1986).

As inferred from the primarily LC II material clusters (see Figure 6, above), the Vasilikos Valley experienced a shift in settlement location to the south. This shift may be attested by a lower number of activity clusters at *Mitsingites*, *Archangelos* and *Laroumena* and a higher concentration of material around the LC *Ayios Dhimitrios-Kafkalia-Mangia* clusters, aligning with the edge of the chalk plateaus, and the establishment of a coastal site (Tochni *Lakkia*). *Ayios Dhimitrios* is the only LC excavated settlement and has material evidence indicative of an urban centre of politico-economic complexity, one with interregional and international networking (South 1989). The most impressive feature of this site is a monumental ashlar building (Building X) that contains evidence for olive pressing and at least one large storage room that could have held an estimated 50,000 litres of olive oil (Keswani 1989: 15–16; 2015: 4–5). Unfortunately, the available stratigraphy of *Ayios Dhimitrios* does not yet provide clear details on the origins of this urban settlement.

Knapp (2013: 398) argued reasonably that the concentration of population into urban centres and the need to provide subsistence to specialists required an intensification in agricultural production. He also suggested that the agro-pastoral character of the ProBA (MC III–LC IIIA) was not significantly different from

that of the Prehistoric Bronze Age (EC/MC), and that the island of Cyprus rapidly became town-centred, industrial in nature and fully integrated into the eastern Mediterranean world (Knapp 2013: 348). As mentioned, the origins of the primarily LC II site of *Ayios Dhimitrios* (after ca. 1400 BC) remain unclear, while the processes leading to its urban character become more perplexing with the recovery of imported goods, including a Levantine pilgrim flask and a possible Canaanite jar in the LC I tombs from Kalavassos (Todd and Pearlman 1986: 193, 214; but cf. Manning *et al.* 2002: 140). Such artefacts suggest some degree of connectivity that seems to pre-date the urban establishment at *Ayios Dhimitrios*.

The construction of a monumental building with large storage capacity, regarded as one of the main indicators of urbanisation at *Ayios Dhimitrios*, suggests a sustained generation of agricultural surplus (olives at least), which probably existed before the construction of the building at some point during the LC II period (South 1997: 173; Keswani 2015). Thus one might argue that the shift in the scale of surplus storage attested at *Ayios Dhimitrios*, which some view as a shift to urban-based, elite-sponsored surplus storage (Fisher 2009; Hadjisavvas 2009; Hadjisavvas and Chaniotis 2012), should not be considered as unrelated to the MC rural landscape. Rather, it should be seen together with a long-term intensification inherent from the MC agrarian economic structure.

Moreover, the cluster of material aggregation moved only 4 km south (30–50 minutes' walking distance, according to Georgiou 2007: 445–46), from the MC *Malouteri-Laroumena-Spilios-Kalavassos Village* cluster to the LC *Ayios Dhimitrios, Kafkalia* and *Mangia* cluster. While LC material concentrated at the interface between the lowlands and the chalk plateaus, where both productive zones featuring in the MC rural economy were accessible, this short spatial shift was significant as it reflects, among other factors influencing nucleation (Bintliff 1999;

Smith 2014), changes in the intensity and scale of exploitation in these productive zones (e.g. Salade and Braun 1982: 21; Casana 2007: 216; Halstead 2014: 216–19).

To summarise, agricultural intensification may not have been spurred on by rapid urban development, but was rather the consequence of multiple intersecting factors (Smith 2014: 522–24). Among them, we should consider local movement, namely a shift of individuals or households within familiar, geographically contiguous markets with minimal social disruption to existing loci of production and socioeconomic relations. Alongside a series of long-discussed factors (summarised in Knapp 2013: 348–49; Fisher 2014: 185–87), urban nucleation in the Vasilikos Valley could have developed following a period of incremental improvements in agricultural productivity. In such a case, the combination of long-term improvements to yields and opportunistic use of locales habituated for exchange and/or manipulated extensively by the rural populations (Smith 2014: 516) may have encouraged the development of settlements like *Ayios Dhimitrios*.

Understanding the Rural Landscape of the Late Bronze Age

The excavated remains of *Ayios Dhimitrios*, located 8 km south of the local copper sources, reveal a grid plan and include monumental architecture, craft specialisation, evidence for the use of writing (Cypro-Minoan) and access to imported artefacts. As a result, the rural economy of the Vasilikos Valley in the LC period has traditionally been explored from a top-down perspective.

Keswani (1992), referencing ethnographic parallels and following gas chromatography analysis, argued that the 50,000 litres of olive oil stored in the monumental building at *Ayios Dhimitrios* (Building X) exceeded the subsistence requirements of the site's estimated population of 750–1250 people (Keswani 1993: 77). From a top-down perspective, she suggested that the surplus was redistributed throughout the valley, particularly to mining and agricultural popu-

lations—an argument supported by the site's excavator (Tsipopoulou and South 2012: 223). It remains unclear whether this system embodies surplus production controlled by an elite group and redistributed to a non-food producing specialist population as well as to the wider valley for political control, or if other forms of socioeconomic interaction were at play (but see also Keswani 2015).

Arguably, it is a greater challenge to assume the existence of a coercive element controlling the valley's productive capacity than it is to propose a situation in which mutual opportunism was pursued. As noted with respect to peasant groups, products may have moved along various socioeconomic networks and mechanisms with less antagonistic relationships and involving less formalistic and coercive concepts such as unities, collectives, negotiation patterns and morality systems (e.g. Wolf 1966: 81, 106–109; Attalides 1976; Halligan 1983: 18; Halstead 1992; Ellis 1993; Casana 2007: 214–16; Souvatzi 2013: 44–45). This is not to deny that elements of socioeconomic pressure to centralise resources existed at some scale, but it asks less of the current evidence to consider the site of *Ayios Dhimitrios* within a geographically more limited political scope.

Keswani (1993: 77) estimated that if the entire assemblage of storage pithoi contained olive oil, provisions for 1000 people would have been available over a period of two years. If *Ayios Dhimitrios* had a population of 750–1250, with a maximum of 2000 (Keswani 2015: 19), and if the olive oil in the pithoi was consumed exclusively by the settlement's population, very little or even no surplus would have been available for redistribution outside the settlement. Considering more recent VVP publications (Todd 2004; 2013) and geophysical survey results (Urban *et al.* 2014) suggestive of a larger, and presumably more populous *Ayios Dhimitrios* (similar to neighbouring Maroni—Manning *et al.* 2014), we might envision a more limited redistributive extent for olive oil.

Before introducing other hypotheses regarding the rural landscape of the Vasilikos Valley, it is necessary to understand the extent as well as the location of LC sites. In Figure 6 (above) the total number of LC sites with a scatter [5] or a large/considerable quantity of potsherds [6] is ten. Amongst those ten sites only *Tochni Oriti*, *Kalavastos Arkhangelos* and *Laroumena*, *Tochni Lakkia* and *Kafkalia IV* (adjacent to and probably part of *Ayios Dhimitrios*) contain *pithos* sherds, or sherds of Monochrome and Plain Ware (Figure 7), all of which also occur in abundance within other agricultural sites on Cyprus (Steel and McCartney 2008: 16). These Vasilikos Valley areas are also the ones that contain material chronologically comparable to the excavated areas at *Ayios Dhimitrios* and they have the clearest evidence for some substantial scale of storage for agricultural products.

The above information raises a two-part question: How do these LC sites acquire their oil, and how does *Ayios Dhimitrios* acquire its oil if it is largely a settlement of specialists and presumably non-oil producers?

Foxhall (2007: 132) has argued that contrary to popular scholarly opinion, permanent equipment is not necessary for processing the small amounts of olive oil suitable for household consumption. It is possible that some households would have been able to produce a surplus of olives, which according to Foxhall (2007: 132) would be laborious, wasteful and time consuming to process. Olive surplus within the LC sites of the Vasilikos Valley may have been exchanged within a local sphere of socioeconomic interaction, or possibly transported to *Ayios Dhimitrios* for processing, followed by some form of exchange. Alternatively, or perhaps concurrently, there were olive producers within and/or in close proximity to *Ayios Dhimitrios*, providing olives to Building X and/or the settlement in general.

Foxhall (2007: 79) estimated that on average an olive tree in Greece during the classical period yielded approximately three litres of oil each

harvest. Allowing for the possibility that yields from LBA Cypriot trees may have been different (Keswani 2015: 17), the number of olive trees required to produce 50,000 litres of oil can be estimated at 16,700, or half that amount if the biannual fruiting cycle of the olive trees was synchronised (Forbes 1989: 93; Foxhall 2007: 179). The estimated land requirements for 8300–16,700 olive trees is roughly 83–167 ha (0.83–1.67 sq km), allowing for 100 trees per hectare (Foxhall 2007: 79). Forbes (1989: 93) argued that the amount of stored olive oil could be twice as much as the annual requirements, in order to cover potential vagaries in production. Based on this, the olive oil stored in Building X required approximately 41.5–83.5 ha (0.415–0.835 sq km) of land. This estimate is close to Keswani's (2015: 9) most 'conservative' land estimations for 25,000 litres of olive oil (62.5 ha). These approximations may suggest three possibilities: (1) the group associated with Building X controlled an area four to eight times larger than the area South (2000: 60) has posited as the total settlement size (11.5 ha)—the area under the control of those operating in Building X would be larger if people harvested olives annually (non-synchronised fruiting), if they also used the land for other crops (Halstead 2014: 205–206) or if the density of trees was lower (Keswani 2015: 8); (2) Building X controlled a smaller area (or potentially no olive groves) and olives were transported from the surrounding valley through less formal mechanisms; (3) some combination of possibilities (1) and (2) existed.

These hypotheses indicate several types of socioeconomic relationships based on production and exchange of agricultural products, and these relationships may imply different categories of rural population. The labour requirements for the construction and maintenance of this monumental building indicate that there existed a degree of politico-economic influence over a wider population (Knapp 2013: 360–61). The extent and reach of this influence, however,

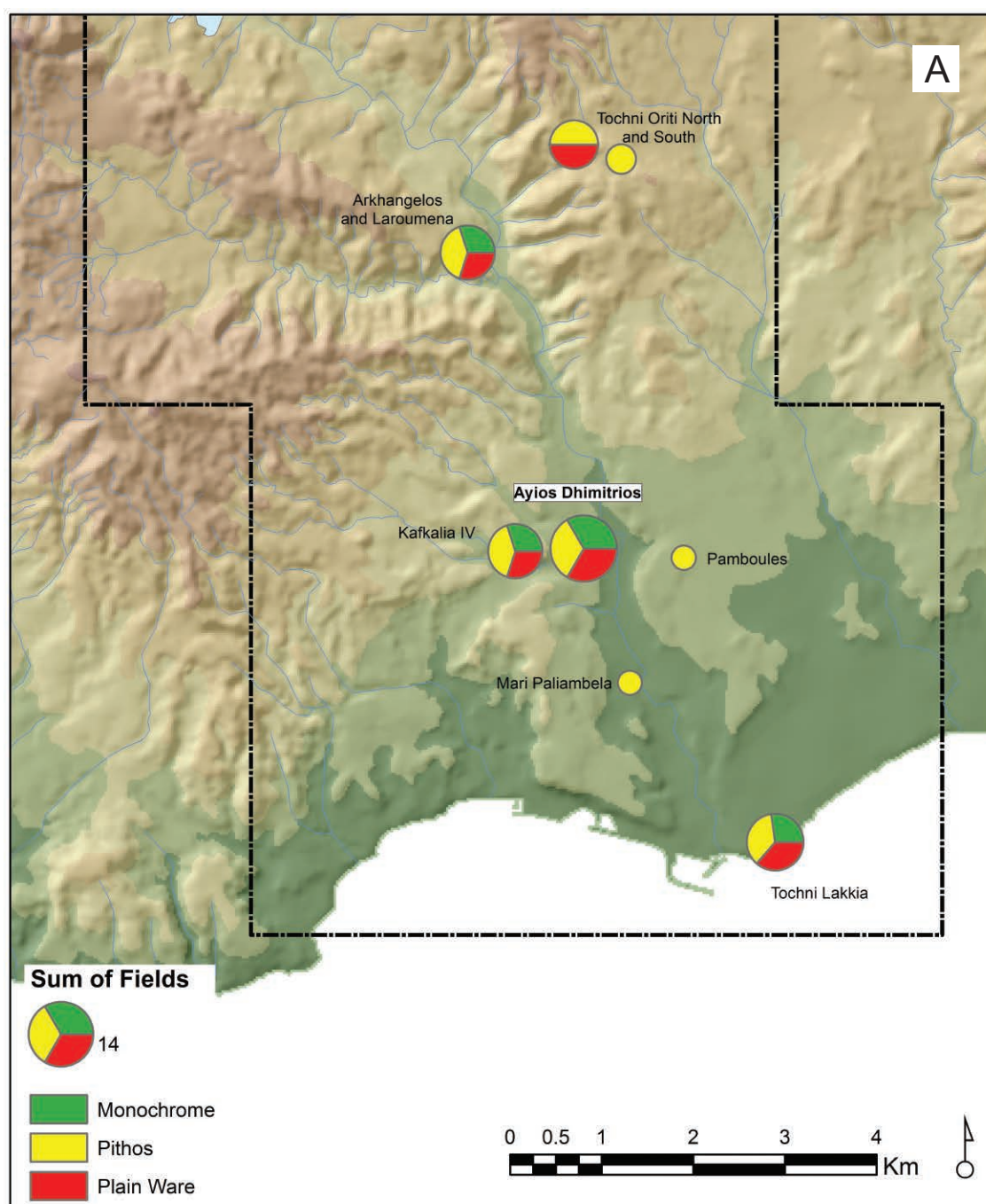
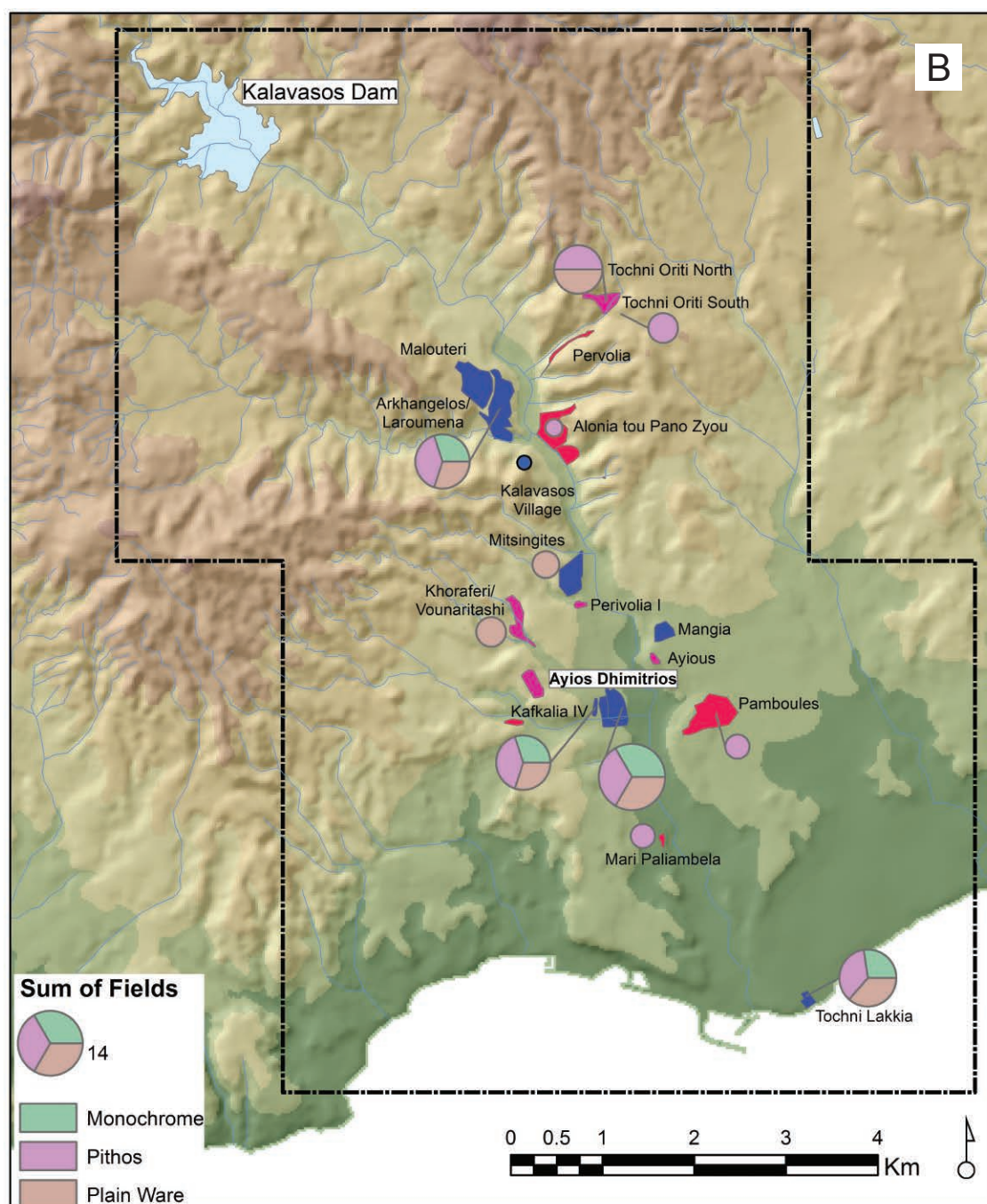


Figure 7. Maps (A above and B opposite) showing the relative distribution of *pithos*, Monochrome and Plain Ware sherds in LC material clusters in the Vasilikos Valley. (based on Todd 2004: 27-144; 2013: 93, fig. 13). Base map provided by the Department of Geology, Republic of Cyprus.



is unclear. It is also uncertain if such influence was based on agricultural products, the management of which seems to be a primary focus in Building X, or if it was also based on other resources, such as copper.

A case may be made that peasants were connected directly to Building X and produced the oil. It is unclear whether these people resided in the domestic area excavated at *Ayios Dhimitrios* (South 1980; 1983), in nearby sites, or in both. Any mechanisms of coercion or economic incentives that may have characterised the relationship between the peasants and those who controlled Building X are even more uncertain. It follows that, at the very least, we may consider the group controlling Building X and profiting from large-scale exploitation of olives as agricultural entrepreneurs.

At the same time, some people may have resided within and amongst the identified sites throughout the valley and may be distinguished by their ability to produce a surplus of olives for exchange at *Ayios Dhimitrios*. Those unable to produce a surplus may have relied on interactions within local socioeconomic networks, by forming horizontal and/or vertical coalitions to accommodate individual and collective interests. The available material evidence does not suggest that *Ayios Dhimitrios* was necessarily controlling the local networks established within the rural landscape. It is also unknown whether the people associated with *Ayios Dhimitrios* more opportunistically acted as middlemen, although this suggestion is not unlikely (e.g. Wolf 1966: 42; Halligan 1983: 18).

I inferred the relationships outlined above based on extensive evidence from a single crop (so also Keswani 2015: 4–5). It is important to consider how the gamut of subsistence resources could expand these socioeconomic networks and the characteristics of the groups that comprised them. The floral and faunal assemblage of *Ayios Dhimitrios*, while limited, contains subsistence crops such as wheat, barley, lentils and grapes, as well as building materials for roofing

such as pine wood (not local to the lowlands—Hansen 1989), in addition to animal remains consisting largely of goat, with some ox and deer in the mix (Croft 1989). Based on multi-context evidence, we cannot suggest that the monumental building was used to store some or any of the plant and animal resources identified in the remains. On the contrary, the floral and faunal remains indicate some local and distant relationships with the valley uplands (goat, pine wood, grapes and deer) and lowlands (wheat and lentils).

As part of my discussion on the EC/MC rural economy, I mentioned that cereal cultivation theoretically could be practised in the uplands and the lowlands, although the lowlands (south of *Ayios Dhimitrios*) favour more intensive cultivation. There is no evidence to suggest a strictly formal organisation of cereal cultivation, which suggests some potential for multiple scales of production and degrees of formality in exchange. The production and exchange of cereal would have involved at least the peasants associated with Building X, as well as other small and larger landholders, who may be inferred from the material assemblages of the domestic components of *Ayios Dhimitrios* (e.g. differing amounts and sizes of storage vessels—South 1980: 43; 1983: 104).

Based on the faunal evidence, we may suggest that amongst the rural population, some were engaged in large-scale pastoralism involving extensive economic networks, while others were engaged in smaller-scale pastoralism and agriculture operating in more localised networks of exchange (Banning 1986: 37; Barker 1988: 773; Forbes 1994: 196; Halstead 2014: 289–94). The differences in the scale of pastoralism as well as the degree to which pastoralists participated in localised and/or regional exchange networks could suggest differing degrees of mobility in the rural landscape. We should add that mobility in the rural landscape can also be implied via the evidence for deer hunting and the transportation of animal remains (whether brought alive

or as carcasses) to the lowlands, along with pine and presumably copper.

Given the generally accepted importance of copper for the LC economy and despite a lack of evidence for the mechanisms of its exploitation and transport, we must consider that at a minimum, part-time mining existed (Knapp 1998: 13). Finds in both the domestic and the 'semi-formal' buildings of *Ayios Dhimitrios* attest to the presence of metallurgy to some degree (Todd 2013: 26-27). It remains unclear, however, whether those involved in mining resided in unsurveyed or now largely destroyed or buried areas surrounding the mines (Todd 2013: 15), or around Kalavassos Village, 4 km southeast of the mines. Both locales are possible, as the intensity and seasonality of LC mining in the Vasilikos Valley is unknown. Regardless of their location, those involved in mining would have played an integral part in the rural landscape of the Vasilikos Valley.

Finally, it is necessary to consider how the population of the valley articulated with extra-valley economic networks (within and possibly beyond the island), as suggested by imported artefacts, including the imposing examples from LC II tombs found around or below Building X (South 2000). Todd (2013: 15-27) has linked the luxury LC II imports to copper, which he considered to be the foundation of the Vasilikos Valley economy (Todd 2013: 15-27), despite the lack of sufficient direct evidence to argue for the scale of copper exploitation of the nearby mines during the LBA (Tsipopoulou and South 2012: 223). At the same time, researchers have considered Cypriot agricultural products as exportable marketable commodities only in some cases (e.g. Hadjisavvas 1996a; Keswani 2015), despite the recovery of Cypriot pithoi in the Point Iria, Cape Gelidonya and Uluburun shipwrecks (Lolos 1999: 43; Bass 1967: 123; Pulak 1998), along with evidence for closed vessels from Cyprus circulating in the eastern Mediterranean during this (Steel 2013: 131-35) and earlier periods (Maguire 2009). We should add that *Ayios*

Dhimitrios was located equidistant from the LC sites of the uplands and a possible anchorage at Tochni *Lakkia*. This potential anchorage was established at some point during LC II and would have opened up the valley to intra-island and possibly extra-island exchange of seaborne products.

The strategic location of *Ayios Dhimitrios*, the estimated capacity of the storage pithoi in Building X, as well as the economic importance of olive oil as a marketable (Hadjisavvas 1996b: 130-31) and 'commercially successful' product (Butzer 2005: 1776), may suggest that olive oil was likely part of extra-community trade alongside other perishable materials and copper. As such, Building X was likely a specialised processing area for an investment crop, which was probably a key resource for foreign trade alongside copper. If that is the case, the topic of redistribution for the LBA Vasilikos Valley (Keswani 1993) requires additional attention—something that has been addressed more systematically in the Aegean world (Earle 2011; Galaty *et al.* 2011; Nakassis *et al.* 2011; for Cyprus, see also Keswani 2015). A number of researchers agree that redistribution, or 'resources mobilisation' (Christakis 2011: 197; Halstead 2011: 233), does not necessarily involve a widespread or all-encompassing control over agricultural communities and may not be used to assume that the general population acquired subsistence through a centralised system (Lupack 2011: 210).

Rural Landscape Dynamics: Late Bronze Age to Early Iron Age

The breadth and varying scales of relationships operating throughout the rural landscape of the Vasilikos Valley are important for understanding settlement patterning in the Bronze Age, but also for what some have regarded as a systemic collapse of the social economy, linked to decreasing external demand for copper (Georgiou 2015: 131).

Ayios Dhimitrios was abandoned at the close of the LC IIC period (ca. 1200 BC). Within the

Vasilikos Valley, a much sparser, subsequent, Early Iron Age (EIA) (ca. 1125/1100–1000 BC) material assemblage contrasts with the relatively rich spread of LBA material (Figure 8). Abandonment indicates that the cohesion of *Ayios Dhimitrios*'s socioeconomic system depended on existing valley-wide connections and webs of interreliance. Some may argue that the abandonment of *Ayios Dhimitrios*, accompanied by

a reduction in evidence for settlement in the area overall, is one of the convincing strands of evidence for a coordinated local rural economy. There are, however, important reasons for the disparity in material prevalence between the LBA and EIA that may intimate a reconfiguration in settlement patterning rather than large-scale abandonment. Firstly, the VVP has demonstrated a Bronze Age recovery bias during the collection



Figure 8. Map showing the locations of Vasilikos Valley Early Iron Age material (based on Todd 2004: 27–144; 2013: 98, fig. 14). Base map provided by the Department of Geology, Republic of Cyprus.

of surface material (Todd 2013: 90-92). To this we should add a long tradition of research focusing on the Cypriot Iron Age city kingdoms and a poorer understanding of the EIA rural landscape (Given and Knapp 2003: 270-71). Finally, it is possible that extensive Archaic clusters recorded throughout the Vasilikos Valley overlay Geometric deposits (Todd 2013: 98-99), or that the Geometric period may have been characterised by a highly mobile rural population and shorter-lived settlements and activity areas (Smith 2014), which would contrast with new settlement configurations observed in other parts of the island (Iacovou 2013).

Following the abandonment of *Ayios Dhimitrios*, it is likely that some people, perhaps those involved with the urban economy more opportunistically, and who were therefore more dependent upon it, either left the valley or drastically increased their movement within it. At the same time, those involved less intimately with *Ayios Dhimitrios* would continue to reconfigure their local networks of socioeconomic interaction (see also Halligan 1983: 18; Terrenato 2007: 20-21). In order to explore whether settlement reconfiguration is a consequence of population mobility or other factors, we need better evidence for changing numbers and distribution of the valley's population.

Conclusions

This study argues that a bottom-up perspective on regional survey material can highlight greater socioeconomic variability amongst the population of the LC rural landscape than previously argued. The diachronic spatial analysis of the Vasilikos Valley demonstrates the need to reconsider the concept of an 'agricultural support village' as well as to examine and contextualise these sites as more autonomous and socioeconomically heterogeneous clusters. Moreover, such rethinking challenges traditional views arguing for a centralised redistribution of goods and suggests the possibility of multiple scales of, and avenues for,

the exchange of rural products. These observations lead to a deeper consideration of the mobility of rural populations, which likely played a significant role in the diachronic reconfigurations of patterns of habitation in the Vasilikos Valley.

It may also be suggested that the land-use patterns, mobility and economic intensification of the MC rural population are linked to the eventual location of *Ayios Dhimitrios*, which came to be an important socioeconomic hub in the valley during the LC II period. Additionally, I have discussed the multiplicity of interactions between what seem to have been the agricultural entrepreneurs at *Ayios Dhimitrios* and the population at sites identified in the surrounding rural landscape. As the structure of rural groups is dependent upon whether and how much power is exercised as a result of their labour (Wolf 1966: 10), they are not necessarily part of asymmetrical structural relationships with those who control surplus, and they may or may not have enduring relationships with various socioeconomic establishments. Amongst those living in the rural landscape here, some were associated with specialised production on a more commercial scale, while others with less formal links to the urban centre relied more on localised socioeconomic networks. While the exploitation of olives and presumably of copper was intensified to a likely significant degree in the Vasilikos Valley, the range of subsistence activities undertaken in the rural landscape (agriculture, pastoralism, part-time mining, wild plant gathering, hunting and logging) was probably accessible to and exploited by the range of rural populations outlined above. Consequently, the degree of control imposed by elite groups and the role of individuals in the regional or even interregional economic networks is likely far more complex and multidirectional than has been suggested.

Finally, I would argue that the level of socioeconomic complexity characterising the rural environment must be considered when investigating the material disparity between the LBA and the EIA in the Vasilikos Valley. It is likely

that patterns of land use and mobility in the valley contributed to both the abandonment of *Ayios Dhimitrios* and the reconfiguration of the settlement pattern during the EIA. If we allow for a higher degree of socioeconomic variability and complexity within the rural landscape, we may find that more opportunistic and mutually beneficial relationships existed within and between rural and urban populations, and we may be able to address the diachronic, widespread and deep-rooted alterations to the social economy of the region.

Acknowledgements

I have been interested in the themes of this paper since my involvement in the *Kalavassos and Maroni Built Environments Project* and the *Tochni Lakkia* survey, both conducted with permission from the Cypriot Department of Antiquities. The Department of Geology provided and permitted the use and publication of a significant geospatial dataset, without which this study would have been impossible. I am grateful for the critique and insightful comments of Sturt Manning on the early drafts of this paper, along with the reviews and editorial work provided by *JMA*.

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References

Andreou, G.M., and D.A. Sewell

- 2015 *Tochni-Lakkia* revealed: reconsidering settlement patterns in the Vasilikos and Maroni Valleys, Cyprus. In H. Matthäus, B. Morstadt and C. Vonnhoff (eds.), *PoCA (Postgraduate Cypriot*

Archaeology) 2012, 198-219. Newcastle: Cambridge Scholars.

Åström, P., and E. Herscher (eds.)

- 1996 *Late Bronze Age Settlements in Cyprus: Function and Relationship*. Studies in Mediterranean Archaeology, Pocket-book 126. Jonsered, Sweden: P. Åström's Förlag.

Attalides, M.

- 1976 Forms of peasant incorporation in Cyprus during the last century. In M. Dimen and E. Friedl (eds.), *Regional Variation in Modern Greece and Cyprus: Toward a Perspective on the Ethnography of Greece*, 363-78. New York: New York Academy of Sciences. <http://dx.doi.org/10.1111/j.1749-6632.1976.tb47660.x>

Banning, E.G.

- 1986 Peasants, pastoralists and *Pax Romana*: mutualism in the southern highlands of Jordan. *Bulletin of the American Schools of Oriental Research* 261: 25-50. <http://dx.doi.org/10.2307/1357062>

Barker, G.

- 1988 Archaeology and the Etruscan countryside. *Antiquity* 62 (237): 772-85. <http://dx.doi.org/10.1017/S0003598X00075220>

Bass, G.F.

- 1967 *Cape Gelidonya: A Bronze Age Shipwreck*. Transactions of the American Philosophical Society 57.8. Philadelphia: American Philosophical Society.

Bintliff, J.L.

- 1999 Settlement and territory. In G. Barker (ed.), *Companion Encyclopedia of Archaeology*, 505-45. London and New York: Routledge.

- 2011 Problems of chronology and function in survey assemblages: the 1999 Hidden Landscape debate reviewed. In M. van Leusen, G. Pizziolo and L. Sarti (eds.), *Hidden Landscapes of Mediterranean Europe: Cultural and Methodological Biases in Pre- and Protohistoric Landscape Studies*. British Archaeological Reports, International Series 2320: xv-xix. Oxford: Archaeopress.

Bowes, K., M. Ghisleni, C. Grey and E. Vaccaro

- 2011 Excavating the Roman peasant. *Expedition* 53(2): 4-12.

Butzer, K.W.

- 2005 Environmental history in the Mediterranean world: cross-disciplinary investigation of cause-and-effect for degradation and soil erosion. *Journal of Archaeological Science* 32: 1773-1800. <http://dx.doi.org/10.1016/j.jas.2005.06.001>

- Casana, J.
2007 Structural transformations in settlement systems of the northern Levant. *American Journal of Archaeology* 111: 195-221. <http://dx.doi.org/10.3764/aja.111.2.195>
- Catling, H.W.
1962 Patterns of settlement in Bronze Age Cyprus. *Opuscula Atheniensia* 4: 129-69.
- Chang, C.
1994 Sheep for the ancestors: ethnoarchaeology and the study of ancient pastoralism. In P.N. Kardulias (ed.), *Beyond the Site: Regional Studies in the Aegean Area*, 353-71. Lanham, Maryland: University Press of America.
- Cherry, J.F.
2003 Archaeology beyond the site: regional survey and its future. In J.K. Papadopoulos and R.M. Leventhal (eds.), *Theory and Practice in Mediterranean Archaeology: Old World and New World Perspectives*. *Cotsen Advanced Seminars* 1: 137-57. Los Angeles: *Cotsen Institute of Archaeology*, UCLA.
- Christakis, K.S.
2011 Redistribution in Aegean palatial societies: redistribution and political economies in Bronze Age Crete. *American Journal of Archaeology* 115: 197-205. <http://dx.doi.org/10.3764/aja.115.2.197>
- Christodoulou, D.
1959 *The Evolution of the Rural Land Use Pattern in Cyprus*. World Land Use Survey, Monograph 2. Bude, UK: Geographical Publications.
- Coleman, J.E., J.A. Barlow, M. Mogelonsky and K.W. Scharr
1996 *Alambra: A Middle Bronze Age Site in Cyprus. Investigations by Cornell University, 1975-1978*. *Studies in Mediterranean Archaeology* 118. Jonsered, Sweden: P. Åström's Förlag.
- Crewe, L.
2007 *Early Enkomi: Regionalism, Trade and Society in the Beginning of the Late Bronze Age on Cyprus*. *British Archaeological Reports, International Series* 1706. Oxford: Archaeopress.
- Croft, P.
1988 Animal remains from Maa Palaeokastro. In V. Karageorghis and M. Demas (eds.), *Excavations at Maa-Palaeokastro 1979-1986*, 449-57. Nicosia: Department of Antiquities, Cyprus.
1989 Animal bones. In I.A. Todd (ed.), *Vasilikos Valley Project 3. Kalavassos-Ayios Dhimitrios II. Ceramics, Objects, Tombs, Specialist Studies*. *Studies in Mediterranean Archaeology* 71(3): 70-72. Göteborg: P. Åström's Förlag.
- 2003 The animal remains. In S. Swiny, G. Rapp and E. Hersher (eds.), *Sotira Kaminoudhia: An Early Bronze Age Site in Cyprus*. *American Schools of Oriental Research, Archaeological Reports* 8. Cyprus American Archaeological Research Institute, Monograph 4: 439-47. Boston: American Schools of Oriental Research.
- 2006 Animal bones. In D. Frankel and J.M. Webb (eds.), *Marki Alonia: An Early and Middle Bronze Age Settlement in Cyprus: Excavations 1995-2000*. *Studies in Mediterranean Archaeology* 123(2): 263-81. Sävedalen, Sweden: P. Åström's Förlag.
- D'Altroy, T., and T.K. Earle
1985 Staple finance, wealth finance, and storage in the Inka political economy. *Current Anthropology* 26: 187-206. <http://dx.doi.org/10.1086/203249>
- Dammann, N.M.
2008 From seeds to landscape in Phlamoudhi, Cyprus. In J.S. Smith (ed.), *Views from Phlamoudhi, Cyprus*. *Annual of the American Schools of Oriental Research* 63: 99-110. Boston: American Schools of Oriental Research.
- du Plat Taylor, J.
1952 A Late Bronze Age settlement at Aplki, Cyprus. *The Antiquaries Journal* 32: 133-67. <http://dx.doi.org/10.1017/S0003581500076800>
- Earle, T.K.
2011 Redistribution in Aegean palatial societies. Redistribution and the political economy: the evolution of an idea. *American Journal of Archaeology* 115: 237-44. <http://dx.doi.org/10.3764/aja.115.2.237>
- Ellis, F.
1993 *Peasant Economics: Farm Households and Agrarian Development*. Cambridge: Cambridge University Press.
- Falconer, S.E., P.L. Fall, J. Hunt and M.C. Metzter
2010 Agrarian settlement at Politiko-Troullia, 2008. *Report of the Department of Antiquities, Cyprus*, 183-98.
- Fall, P.L., S.E. Falconer, C.S. Galletti, T. Shirmang, E. Ridder and J. Klinge
2012 Long-term agrarian landscapes in the Troodos foothills, Cyprus. *Journal of Archaeological Science* 39: 2335-47.

- Farinetti, E.
 2011 *Boeotian Landscapes: A GIS-Based Study for the Reconstruction and Interpretation of The Archaeological Datasets of Ancient Boeotia*. British Archaeological Reports, International Series 2195. Oxford: Archaeopress.
- Fisher, K.D.
 2009 Elite place-making and social interaction in the Late Cypriot Bronze Age. *Journal of Mediterranean Archaeology* 22: 183-209.
 2014 Making the first cities on Cyprus: urbanism and social change in the Late Bronze Age. In A.T. Creekmore III and K.D. Fisher (eds.), *Making Ancient Cities: Space and Place in Early Urban Societies*, 181-219. Cambridge: Cambridge University Press.
- Forbes, H.
 1989 Of grandfathers and grand theories: the hierarchized ordering of responses to hazard in a Greek rural community. In P. Halstead and J. O'Shea (eds.), *Bad Year Economics: Cultural Responses to Risk and Uncertainty*, 87-97. Cambridge: Cambridge University Press.
 1994 Pastoralism and settlement structures in ancient Greece. In P. Doukellis and L. Mendoni (eds.), *Structures Rurales et Sociétés Antiques*. Annales littéraires de l'université de Besançon 508. Centre de recherches d'histoire ancienne 126: 187-96. Paris: Centre National de la Recherche Scientifique.
 2000 The agrarian economy of the Ermionidha around 1700: an ethnohistorical reconstruction. In S. Sutton (ed.), *Contingent Countryside: Settlement, Economy and Land Use in the Southern Argolid since 1700*, 41-70. Stanford: Stanford University Press.
- Foxhall, L.
 1990 The dependent tenant: land leasing and labour in Italy and Greece. *Journal of Roman Studies* 80: 97-114.
 2004 Small, rural farmstead sites in ancient Greece: a material culture analysis. In F. Kolb (ed.), *Chora und Polis*. Schriften des Historischen Kollegs 54: 249-70. München: R. Oldenbourg Verlag.
 2007 *Olive Cultivation in Ancient Greece: Seeking the Ancient Economy*. Oxford: Oxford University Press.
- Frankel, D., and J.M. Webb (eds.)
 2006 *Marki Alonia: An Early and Middle Bronze Age Settlement in Cyprus. Excavations 1995-2000*. Studies in Mediterranean Archaeology 123(2). Sävedalen, Sweden: P. Åström's Förlag.
- Galaty, M.L., D. Nakassis and W.A. Parkinson
 2011 Redistribution in palatial societies. Introduction: why redistribution? *American Journal of Archaeology* 115: 175-76.
- Garnsey, P.
 1979 Where did Italian peasants live? *Proceedings of the Cambridge Philological Society* 25: 1-25.
 1988 [1976] Peasants in ancient Roman society. In P. Garnsey and W. Scheidel (eds.), *Cities, Peasants, and Food in Classical Antiquity: Essays in Social and Economic History*, 91-106. Cambridge: Cambridge University Press.
- Georgiou, A.
 2015 Cyprus during the 'crisis years' revisited. In A. Babbi, F. Bubenheimer-Erhart, B. Marín-Aguilera and S. Mühl (eds.), *The Mediterranean Mirror: Cultural Contacts in the Mediterranean Sea Between 1200 and 750 B.C.* Tagungen 20: 129-45. Mainz: Römisch-Germanisches Zentralmuseum.
- Georgiou, G.
 2007 Η τοπογραφία της ανθρώπινης εγκατάστασης στην Κύπρο κατά την Πρώιμη και Μέση Χαλκοκρατία. Unpublished PhD dissertation, Department of History and Archaeology, University of Cyprus, Nicosia.
- Georgiou, G., J.M. Webb and D. Frankel
 2011 *Psematismenos-Trelloukkas: An Early Bronze Age Cemetery in Cyprus*. Nicosia: Department of Antiquities.
- Given, M.
 2000 Agriculture, settlement and landscape on Ottoman Cyprus. *Levant* 32: 215-36.
 2004 *The Archaeology of the Colonized*. London and New York: Routledge.
- Given, M., and A.B. Knapp
 2003 *The Sydney Cyprus Survey Project: Social Approaches to Regional Archaeological Survey*. Monumenta Archaeologica 21. Los Angeles: Cotsen Institute of Archaeology, UCLA.
- Given, M., A.B. Knapp, J.S. Noller, L. Sollars and V. Kasianidou
 2013a *Landscape and Interaction: The Troodos Archaeological and Environmental Survey Project, Cyprus. I: Methodology, Analysis and Interpretation*. Levant Supplementary Series 14. Oxford: Council of British Research in the Levant and Oxbow Books.

- 2103b *Landscape and Interaction: The Troodos Archaeological and Environmental Survey Project, Cyprus. II: The TAESP Landscape*. Levant Supplementary Series 15. Oxford: Council of British Research in the Levant and Oxbow Books.
- Gomez, B., J. Hansen and J.M. Wagstaff
2004 The Vasilikos Valley. In I.A. Todd (ed.), *Vasilikos Valley Project 9. The Field Survey of Vasilikos Valley I*. Studies in Mediterranean Archaeology 71(9): 6-16. Sävedalen, Sweden: P. Åström's Förlag.
- Hadjisavvas, S.
1992 *Olive Oil Processing in Cyprus: From the Bronze Age to the Byzantine Period*. Studies in Mediterranean Archaeology 99. Göteborg: P. Åström's Förlag.
- 1996a Alassa: a regional centre of Alasia? In P. Åström and E. Herscher (eds.), *Late Bronze Age Settlement in Cyprus: Function and Relationship*. Studies in Mediterranean Archaeology, Pocket-book 126: 23-38. Jonsered: P. Åström's Förlag.
- 1996b The economy of the oil. In V. Karageorghis and D. Michaelides (eds.), *The Development of the Cypriot Economy from the Prehistoric Period to the Present Day*, 127-38. Nicosia: University of Cyprus and the Bank of Cyprus.
- 2009 Wine for the elite, olive oil for the masses: some aspects of early agricultural technology in Cyprus. In J.D Schloen (ed.), *Exploring the Longue Durée: Essays in Honor of Lawrence E. Stager*, 141-49. Winona Lake, Indiana: Eisenbrauns.
- Hadjisavvas, S., and A. Chaniotis
2012 Wine and olive oil in Crete and Cyprus: socio-economic aspects. In G. Cadogan, M. Iacovou, K. Kopaka and J. Whitley (eds.), *Parallel Lives: Ancient Island Societies in Crete and Cyprus*. British School of Athens Studies 20: 157-73. London: British School at Athens.
- Halligan, J.M
1983 Role of the peasant in the Amarna period. In J.W. Flanagan (ed.), *Palestine in Transition: The Emergence of Ancient Israel*. Social World of Biblical Antiquity 2: 15-24. Sheffield: Almond Press.
- Halstead, P.
1987 Traditional and ancient rural economy in Mediterranean Europe: plus ça change? *Journal of Hellenic Studies* 107: 77-87.
- 1992 The Mycenaean palatial economy: making the most of the gaps in the evidence. *Proceedings of the Cambridge Philological Society* 38: 57-86.
- 2011 Redistribution in Aegean palatial societies: terminology, scale, and significance. *American Journal of Archaeology* 115: 229-35.
- 2014 *Two Oxen Ahead. Pre-Mechanized Farming in the Mediterranean*. Chichester, UK: Wiley-Blackwell.
- Hansen, J.
1989 Botanical remains. In I.A. Todd (ed.), *Vasilikos Valley Project 3. Kalavassos-Ayios Dhimitrios II. Ceramics, Objects, Tombs, Specialist Studies*. Studies in Mediterranean Archaeology 71(3): 82-93. Göteborg: P. Åström's Förlag.
- Horden, P., and N. Purcell
2000 *The Corrupting Sea: A Study of Mediterranean History*. Oxford: Basil Blackwell.
- Hussein, J., and M.A. Adey
1995 Changes of structure and tilth mellowing in a vertisol due to wet/dry cycles in the liquid and vapour phases. *European Journal of Soil Science* 46: 357-68.
- Iacovou, M.
2013 Historically elusive and internally fragile island polities: the intricacies of Cyprus's political geography in the Iron Age. *Bulletin of the American Schools of Oriental Research* 370: 15-47.
- Karageorghis, V.
1991 *The Coroplastic Art of Ancient Cyprus I. Chalcolithic-Late Cypriot I*. Nicosia: Leventis Foundation.
- Kearney, M.
1996 *Reconceptualizing the Peasantry*. Boulder, Colorado: Westview Press.
- Keswani, P.S.
1989 The pithoi and other Plain Ware vessels. In I.A. Todd (ed.), *Vasilikos Valley Project 3. Kalavassos-Ayios Dhimitrios II. Ceramics, Objects, Tombs, Specialist Studies*. Studies in Mediterranean Archaeology 71(3): 12-21. Göteborg: P. Åström's Förlag.
- 1992 Gas chromatography analyses of pithoi from Kalavassos-Ayios Dhimitrios. In A.K. South, Kalavassos-Ayios Dhimitrios 1991. *Report of the Department of Antiquities, Cyprus*: 133-46.
- 1993 Models of local exchange in Late Bronze Age Cyprus. *Bulletin of the American School of Oriental Research* 292: 73-83.
- 2015 Olive production, storage, and political economy at Late Bronze Age Kalavassos, Cyprus. In

- A. Jacobs and P. Cosyns (eds), *POCA 2008. Cypriot Material Culture Studies: From Picrolite Carving to Poskynitaria Analysis*, 1-24. Brussels: Brussels University Press.
- Knapp, A.B.
- 1996 Settlement and society on Late Bronze Age Cyprus: dynamics and development. In P. Åström and E. Herscher (eds.), *Late Bronze Age Settlement in Cyprus: Function and Relationship*. Studies in Mediterranean Archaeology, Pocket-book 126: 54-80. Jonsered, Sweden: P. Åström's Förlag.
 - 1997 *The Archaeology of Late Bronze Age Cypriot Society: The Study of Settlement, Survey and Landscape*. Department of Archaeology, University of Glasgow, Occasional Paper 4. Glasgow: Department of Archaeology, University of Glasgow.
 - 1998 Social approaches to the archaeology and anthropology of mining. In A.B. Knapp, V.C. Pigott and E.W. Herbert (eds.), *Social Approaches to an Industrial Past: The Archaeology and Anthropology of Mining*, 1-23. London and New York: Routledge.
 - 2013 *The Archaeology of Cyprus. From Earliest Prehistory through the Bronze Age*. Cambridge: Cambridge University Press.
- Lohse, J.C., and F. Valdez Jr
- 2004 Examining ancient Maya commoners anew. In J.C. Lohse and F. Vadez Jr (eds.), *Ancient Maya Commoners*, 1-21. Austin: University of Texas Press.
- Lolos, Y.G.
- 1999 The cargo of pottery from the Point Iria wreck: character and implications. In W. Phelps, Y. Lolos and Y. Vichos (eds.), *The Point Iria Wreck: Interconnections in the Mediterranean ca. 1200 BC*, 43-53. Athens: Hellenic Institute of Marine Archaeology.
- Lupack, S.
- 2011 Redistribution in Aegean palatial societies. A view from outside the palace: the sanctuary and the *damos* in Mycenaean economy and society. *American Journal of Archaeology* 115: 207-17.
- Maguire, L.
- 2009 *Tell el-Dab'a XXI. The Cypriot Pottery and its Circulation in the Levant*. Untersuchungen der Zweigstelle Kairo des Österreichischen Archäologischen Instituts 33. Denkschriften der Gesamtakademie 51. Wien: Verlag der Österreichischen Akademie der Wissenschaften.
- Manning, S.W., G.M. Andreou, K.D. Fisher, P. Gerard-Little, C. Kearns, J.F. Leon, D.A. Sewell and T.M. Urban
- 2014 Becoming urban: investigating the anatomy of the Late Bronze Age complex, Maroni, Cyprus. *Journal of Mediterranean Archaeology* 27: 3-32.
- Manning, S.W., D.A. Sewell and E. Herscher
- 2002 Late Cypriot IA maritime trade in action: underwater survey at Maroni *Tsaroukkas* and the contemporary east Mediterranean trading system. *Annual of the British School at Athens* 97: 97-162.
- Marx, K
- 2000 *Karl Marx: Selected Writings*. Edited by David McLellan. Oxford: Oxford University Press.
- Nakassis, D., W.A. Parkinson and M.L. Galaty
- 2011 Redistribution in Aegean palatial societies. Redistributive economies from a theoretical and cross-cultural perspective. *American Journal of Archaeology* 115: 177-84.
- Noller, J.S.
- 2008 Physical foundations of Phlamoudhi. In J.S. Smith (ed.), *Views from Phlamoudhi, Cyprus*. Annual of the American Schools of Oriental Research 63: 25-29. Boston: American Schools of Oriental Research.
- Pettegrew, D.
- 2001 Chasing the classical farmstead: assessing the formation and signature of rural settlement in Greek landscape archaeology. *Journal of Mediterranean Archaeology* 14: 189-209.
- Pulak, C.
- 1998 The Uluburun shipwreck: an overview. *International Journal of Nautical Archaeology* 27: 188-224.
- Reese, D.S.
- 1996 Animal bones and shells. In J.E. Coleman, A. Barlow, M. Mogelonsky and K.W. Scharf (eds.), *Alambra: A Middle Bronze Age Site in Cyprus, Investigations by Cornell University, 1975-1978*. Studies in Mediterranean Archaeology 118: 477-514. Jonsered, Sweden: P. Åström's Förlag.
- Salade, J.K., and D.P. Braun
- 1982 Spatial organization of peasant agricultural subsistence territories: distance factors and crop location. In E. Tooker (ed.), *Ethnography by Archaeologists*, 19-41. Washington, DC: American Ethnological Society.
- Shanin, T.
- 1984 Introduction. In T. Shanin (ed.), *Peasants and*

- Peasant Societies*, 11-19. 7th edn. Harmondsworth, UK: Penguin Books.
- Shiel, R.S., and A. Stewart
 2007 The soils and agricultural potential of the Thespias area. In J. Bintliff, P. Howard and A. Snodgrass (eds.), *Testing the Hinterland: The Work of the Boeotia Survey (1989-1991) in the Southern Approaches to the City of Thespias*, 95-109. Cambridge: McDonald Institute for Archaeological Research.
- Smith, M.E.
 2014 Peasant mobility, local migration and premodern urbanization. *World Archaeology* 46: 516-33.
- Sørensen, L.W., and D.W. Rupp (eds.)
 1993 *The Land of the Paphian Aphrodite*. Studies in Mediterranean Archaeology 104(2). Göteborg: P. Åström's Förlag.
- South, A.K.
 1980 Kalavassos-Ayios Dhimitrios 1979: a summary report. *Report of the Department of Antiquities, Cyprus*: 22-53.
 1983 Kalavassos-Ayios Dhimitrios 1982. *Report of the Department of Antiquities, Cyprus*: 92-116.
 1989 From copper to kingship: aspects of Bronze Age society viewed from the Vasilikos Valley. In E. Peltenburg (ed.), *Early Society in Cyprus*, 315-24. Edinburgh: Edinburgh University Press.
 1997 Kalavassos-Ayios Dhimitrios 1992-1996. *Report of the Department of Antiquities, Cyprus*: 152-75.
 2000 Late Bronze Age burials at Kalavassos-Ayios Dhimitrios. In G.K. Ioannides and S. Hadjistilles (eds.), *Πρακτικά του Γ' Διεθνούς Κυπριολογικού Συνεδρίου Α', Αρχαίο Μέρος*: 345-64. Nicosia: Society of Cypriot Studies, Leventis Foundation.
- Souvatzi, S.
 2013 Land tenure, social relations and social landscapes. In M. Relaki and D. Catapoti (eds.), *An Archaeology of Land Ownership*. Routledge Studies in Archaeology 9: 21-45. London and New York: Routledge.
- Steel, L.
 2013 *Materiality and Consumption in the Bronze Age Mediterranean*. Routledge Studies in Archaeology 7. London and New York: Routledge.
- Steel, L., and C. McCartney
 2008 Survey at Arediou Vouppes (*Lithosouras*), a Late Bronze Age agricultural settlement on Cyprus: a preliminary analysis on the material culture assemblages. *Bulletin of the American Schools of Oriental Research* 351: 9-37.
- Steel, L., and S. Thomas
 2008 Excavations at Arediou-Vouppes (*Lithosouras*), Cyprus: an interim report on excavations 2005-2006. *Report of the Department of Antiquities, Cyprus*: 227-49.
- Sutton, S.B.
 2000 Introduction: past and present in rural Greece. In S. Sutton (ed.), *Contingent Countryside: Settlement, Economy and Land Use in the Southern Argolid since 1700*, 1-24. Stanford: Stanford University Press.
- Swiny, S., G. Rapp and E. Hersher (eds.)
 2003 *Sotira Kaminoudhia. An Early Bronze Age Site in Cyprus*. American Schools of Oriental Research, Archaeological Reports 8. Cyprus American Archaeological Research Institute, Monograph 4. Boston: American Schools of Oriental Research.
- Terrenato, N.
 2007 The clans and the peasants: reflections on social structure and change in Hellenistic central Italy. In P. van Dommelen and N. Terrenato (eds.), *Articulating Local Cultures: Power and Identity under the Expanding Roman Republic*. Journal of Roman Archaeology Supplementary Series 63: 13-22. Portsmouth, Rhode Island: Journal of Roman Archaeology.
- Todd, I.A.
 1986 *Vasilikos Valley Project 1. The Bronze Age Cemetery in Kalavassos Village*. Studies in Mediterranean Archaeology 71(1). Göteborg: P. Åström's Förlag.
 2004 *Vasilikos Valley Project 9. The Field Survey of the Vasilikos Valley I*. Studies in Mediterranean Archaeology 71(9). Sävedalen, Sweden: P. Åström's Förlag.
 2013 *Vasilikos Valley Project 12. The Field Survey of the Vasilikos Valley III. Human Settlement in the Vasilikos Valley*. Studies in Mediterranean Archaeology 71(12). Uppsala: Åström Editions.
- Todd, I.A., and D. Pearlman
 1986 Appendix: list of Kalavassos village tombs. In I.A. Todd (ed.), *Vasilikos Valley Project 1. The Bronze Age Cemetery in Kalavassos Village*. Studies in Mediterranean Archaeology 71(1): 188-218. Göteborg: P. Åström's Förlag.
- Tsipopoulou, M., and A. South
 2012 The economics of monumental buildings. In

- G. Cadogan, M. Iacovou, K. Kopaka and J. Whitley (eds.), *Parallel Lives: Ancient Island Societies in Crete and Cyprus*. British School at Athens Studies 20: 209-31. London: British School at Athens.
- Urban, T.M., J.F. Leon, S.W. Manning and K.D. Fisher
 2014 High resolution GPR mapping of Late Bronze Age architecture at Kalavassos-Ayios Dhimitrios, Cyprus. *Journal of Applied Geophysics* 107: 129-36.
- Vaccaro, E., M. Ghisleni, A. Arnoldus-Huyzenveld, C. Grey, K. Bowes, M. MacKinnon, A.M. Mercuri, A. Pecci, M.A. Cau Ontiveros, E. Rattigheri and R. Rinaldi
 2013 Excavating the Roman peasant II. Excavations at Case Nuove, Cinigiano (GR). *Papers of the British School at Rome* 81: 129-79.
- van Dommelen, P.
 1993 Roman peasants and rural organization in central Italy: an archaeological perspective. In E. Scott (ed.), *Theoretical Roman Archaeology: First Conference Proceedings*, 167-86. Aldershot, UK: Avebury.
 2006 Punic farms and Carthaginian colonists: surveying Punic rural settlement in the central Mediterranean. *Journal of Roman Archaeology* 19: 7-28.
- van Dommelen, P., and C. Gómez Bellard
 2008 Agrarian landscapes and rural communities. In P. van Dommelen and C. Gómez Bellard (eds.), *Rural Landscapes of the Punic World*. Monographs in Mediterranean Archaeology 11: 202-40. London: Equinox.
- van Joolen, E.
 2003 Archaeological Land Evaluation. A Reconstruction of the Suitability of Ancient Landscapes for Various Land Uses in Italy Focused on the First Millennium BC. Unpublished PhD dissertation, Programme in Art History and Archaeology, University of Groningen, Netherlands.
- Webb, J.M., and D. Frankel
 1994 Making an impression: storage and surplus finance in Late Bronze Age Cyprus. *Journal of Mediterranean Archaeology* 7: 5-26.
- Wilkinson, T.J.
 2004 The archaeology of landscape. In J.L. Bintliff (ed.), *A Companion to Archaeology*, 334-36. Malden, Massachusetts: Basil Blackwell.
- Winther-Jacobsen, K.
 2007 The role of pottery in the interpretation and classification of rural sites in Cyprus: the functional typology. In H. Vanhaverbeke, J. Poblome, F. Vermeulen and M. Waelkens (eds.), *Dialogue with Sites: The Definition of Space and Time in the Roman Period*. Studies in Eastern Mediterranean Archaeology 8: 21-30. Turnhout, Belgium: Brepols.
- Wolf, E.R.
 1966 *Peasants*. Englewood Cliffs, New Jersey: Prentice-Hall.
 1982 *Europe and the People without History*. Berkeley: University of California Press.

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